

Uncovering Talents and Interests in At-risk Urban Youth:  
Co-designing a path to self-fulfillment

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Uncovering Talents and Interests in At-risk Urban Youth:  
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By

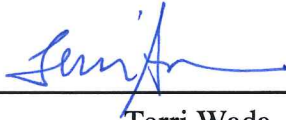
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## { 1 } Abstract

The designer's role has evolved greatly over the past few decades. We are no longer asked to simply create a poster or a web page, but to solve complex problems towards socially relevant topics. Through utilizing a people-centered approach to better understand complex socio-material interactions, designers are able to create meaningful change in organizations, communities, and individuals lives.

This new role has opened up the door to the possibilities of how designer's can create a significant impact on a large scale as well as on an individual level. By seeking to create a change, design researchers identify groups who can be best served with a people-centered approach. This includes those who do not have an active voice in our society and therefore are potentially forgotten. One such group is that of at-risk urban youth.

At-risk urban youth are defined as "adolescents who face disadvantage determined by a level of poverty, social, and family conditions whilst living in an urban community, which hinders their personal development and success (UN-HABITAT, 2003). This can lead to a decreased sense of self-fulfillment, which is exacerbated by a lack of opportunities. The path to self-fulfillment can be reached by bringing to fruition one's deepest interests and capacities or talents, and by giving at-risk urban youth the opportunity to uncover these, an actionable plan for their future can be developed.

By employing a co-design approach, youth collaborated with one another while working with creative tools and methods. Co-design is a process in which designers and non-designers work collaboratively in the design development process to create holistic solutions to problems (Sanders & Stappers, 2008). This research explored how a participatory design approach, such as co-design, can be applied in the development of a process for at-risk urban youth to uncover their latent talents and interests and develop an actionable plan for them to fulfill their future goals. Engaging youth in the process helped to identify, select, and iterate on appropriate co-design tools and methods in order to enhance the inherent creativity in youth and guide them toward the path to self-fulfillment.

With the help of at-risk urban youth, this thesis produced a new process, along with facilitation guidance tools, to help solve this social issue. In a rapidly transforming world, at-risk urban youth can be considered as the forgotten generation of our time. By challenging ourselves to rethink and redesign the process in which youth are accessing their future goals and bringing them to fruition, we are able to pave the way for future social innovation.

**Keywords:** *People-centered, at-risk youth, urban youth, self-fulfillment, co-design, participatory design, social-impact, innovation*

## { 2 } Introduction

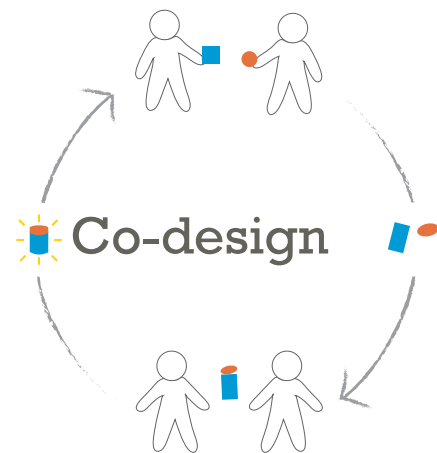
### 2.1 >> At-Risk Urban Youth and Co-design

In an ever-growing world that stresses the importance of linear-sequential reasoning, and mastery of subjects like reading, writing, spelling, and arithmetic, youth are expected to learn in such a way that may not fit their particular learning style. According to Linda Kreger Silverman, psychologist and founder of the Gifted Development Center for children and youth, often youth who learn in a fluid or spatial learning style, where the creative right hemisphere of the brain is favored, frequently struggle in schools that over time have perceived their art programs as being “frills” and cut them due to costs. This can be detrimental particularly to at-risk youth who seldom respond to traditional learning and expressive means. The arts serve as a way for at-risk youth to feel successful in school, and this feeling of success can help to motivate youth toward a more constructive and positive path, as stated by Silverman (Silverman, 2004).

Recently, with the growth of the at-risk youth population, more and more efforts to enhance youth’s inherent creativity are being developed.

Collaborating amongst youth in a creative environment while giving them the tools necessary to succeed can result in many benefits. When creative expression is fostered in at-risk youth, this serves as a way for them to channel their energy in a positive direction. When neglected, they often seek other outlets of delinquency, or risky behaviors, that may be detrimental to themselves and society. By finding something that youth are good at and that they enjoy doing, this can enable them to choose a more constructive path in their lives (Silverman, 2004). “Co-design is a process in which designers and people embedded in the context, work collaboratively in the design development process to create holistic solutions to problems” (Sanders & Stappers, 2008). By employing this approach, and involving youth throughout the process of research and design, there is a greater likelihood of being able to uncover what youth are good at and what they’re interested in, which can also enable them to create an actionable plan for their future, leading them toward a path to self-fulfillment. Liz Sanders, a leading researcher in the field of co-design, states that by utilizing creative tools and collaborative methods of making/building this can help others to creatively express themselves, which can liberate them from the boundaries of what they cannot state in words (Sanders, 2005). Throughout this research, youth will be given this opportunity in order to express their underlying talents and interests in a creative and open manner.

However, involving youth within the design process yields it’s own trials and challenges. Based on research by Barry Checkoway, an internationally-recognized scholar and practitioner on youth empowerment,



the abilities of organizations to interact in co-creative activities can sometimes be constrained by financial resources, staff, and time. These constraints are only intensified when youth are the one's participating in the design process (Checkoway, 2004). A participatory design approach takes resources for the youth to interact with, time after school to engage with creative methods and tools, and the buy-in of a facilitator within an organization, school, group club, or development program to guide youth through the process to uncover their latent talents and interests. Buy-in from the youth must also be gained as generally, they can internalize limitations that have been placed upon them and be wary of how to interact within a co-design process.

According to Silverman, “a disconcerting proportion of the delinquent population is gifted and talented” (Silverman, 2004). The challenge in this research is to show

at-risk urban youth that they are in fact talented and give them the opportunity to make an actionable plan to utilize what they're interested in and talented in to achieve their future goals. This is done in order to increase youth's self-fulfillment,<sup>†</sup> or the feeling of utilizing what one's strongest capabilities and most valued interests. Utilizing a co-design process, along with creativity and collaboration, can help to reposition at-risk urban youth onto a path to self-fulfillment.

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*A disconcerting proportion of the delinquent population is gifted and talented* >> Linda Kreger Silverman

<sup>†</sup> Self-fulfillment will be discussed more in depth in later chapters

## 2.2 >> Designer's Role

Historically, designer's roles have evolved greatly over the past few decades. It used to be that a designer played no earlier role in an innovation development process, and instead came along at the end to put a beautiful wrapper around the idea. Designers focused more on the aesthetic attractiveness of a product in order to enhance brand perception. During the later part of the 20th century however, Tim Brown<sup>†</sup>, CEO of IDEO, states that designers started to play an increasingly larger role in the creation of innovative ideas that better met consumers' needs and desires (Brown, 2008).

Still today, some struggle with the term "design" which has so many levels of meaning that it is itself a source of confusion. John Heskett, a pioneering writer on the subject of design, likens the term to the word "love" whose meaning basically shifts depending upon who is using it, to whom it is applied, and in what context. Design, stripped to its essence can be defined as, "the human capacity to shape and make our environment in ways without precedent, to serve our needs and give meaning to our lives" (Heskett, 2002).

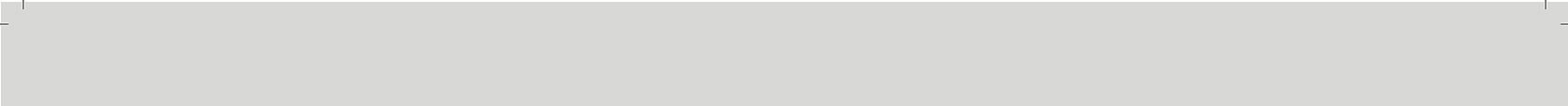
As the ever-evolving world, and definition of design, continues to be reshaped, the manner of which we are incorporating others in the design process continues to evolve as well. Keeping those who you design for at the heart of the design process is known as being "people-centered."<sup>†</sup> The people-centered design approach begins with examining the needs and behaviors of the people who should be affected by the solutions.

<sup>†</sup> Tim Brown is the CEO of IDEO, an international design firm that uses a human-centered design approach to helping organizations innovate and grow

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for more information

<sup>†</sup> The term "people-centered" will be used throughout this research. However, note that some choose to use "human-centered" and these terms are interchangeable



By seeking to understand and listen to what they need and want, this helps to connect better with the people that you are serving, transform data into actionable ideas, see new opportunities, and help to increase the speed and effectiveness of creating appropriate and meaningful solutions.

Co-design is a specific approach that designers use when employing a people-centered methodology, where the users of the solution are active participants in the design development process (Sanders & Stappers, 2008). Thus, those who are going to be affected by the solution have a hand in helping to shape that solution alongside designers.

It is the purpose of this research to explore how a participatory design approach, such as co-design, can be applied in the development of a process for at-risk urban youth to uncover their latent talents and interests and develop an actionable plan for them to fulfill their future goals. In essence, this can help lead youth toward the path to self-fulfillment.

<sup>†</sup> This is an initial research question. Throughout the research, insights were gained that helped to shift the focus, which is indicated in later chapters where the research question changed

## { 3 } Problem Statement

### 3.1 >> Research Question<sup>†</sup>

*How might the utilization of co-design<sup>1</sup> enable at-risk urban youth<sup>2</sup> to uncover latent talents<sup>3</sup> and interests<sup>4</sup> in order to lead to self-fulfillment?<sup>5</sup>*

### 3.2 >> Sub-questions

1. How might at-risk urban youth be primed to realize their creative potential and the mutual benefit of the co-design process?
2. How might appropriate iterative and collaborative activities be identified and selected for at-risk urban youth to experience initial success?
3. How might tools and methods enhance inherent creativity in at-risk urban youth?
4. How might the scaffolding of activities with at-risk urban youth to prime them for initial success?
5. How does the use of co-design enable at-risk urban youth to define and achieve initial success by the act of collaboratively making or creating?



### 3.3 >> Definitions

<sup>1</sup>

#### *Co-design*

A process in which designers and people embedded in the context work collaboratively in the design development process to create holistic solutions to problems. (Sanders & Stappers, 2008)

<sup>2</sup>

#### *At-Risk Urban Youth*

Adolescents who face disadvantage determined by a level of poverty, social, and family conditions whilst living in an urban community, which hinders their personal development and success. (UNHABITAT 2003)

<sup>3</sup>

#### *Talent*

A sum of each persons abilities, inter-instinct gifts, skills, and knowledge that allows them to do well at something. (Merriam Webster, 2014) (Cancar, 2012)

<sup>4</sup>

#### *Interest*

A subject about which one is concerned or enthusiastic. (Merriam Webster, 2014)

<sup>5</sup>

#### *Self-fulfillment*

A state of being which consists of carrying to fruition one's deepest desires or one's worthiest capacities. It is a bringing of oneself to flourishing completion, an unfolding of what is strongest or best in oneself, so that it represents the successful culmination of one's aspirations or potentialities. (Gewirth, 1998)

## { 4 } Justification

### 4.1 >> Importance of improving at-risk urban youth's lives

There exist many definitions of “at-risk urban youth” but for the purpose of this research, a definition by the United Nations Human Settlements Programme<sup>†</sup> has been adapted as, at-risk urban youth are characterized as adolescents who face disadvantages determined by a level of poverty and social and family conditions whilst living in an urban community (UN-HABITAT, 2003). Factors that place urban youth at-risk include the following (*refer to figure 4.1*): low socioeconomic status, teen parenthood, homelessness, low self-esteem, drug or alcohol abuse, poor health or nutrition, deficiency in the English language, inadequate opportunities for success in school, loss of hope for the future, and lack of life goals, as compiled by Janis Kay Dobizl, a previous master's candidate at the University of Wisconsin (Dobizl, 8). Refer to appendix page 163 for more information regarding Dobizl's master's thesis.

<sup>†</sup> “UN-Habitat is [a] programme working towards a better urban future. Its mission is to promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all.”

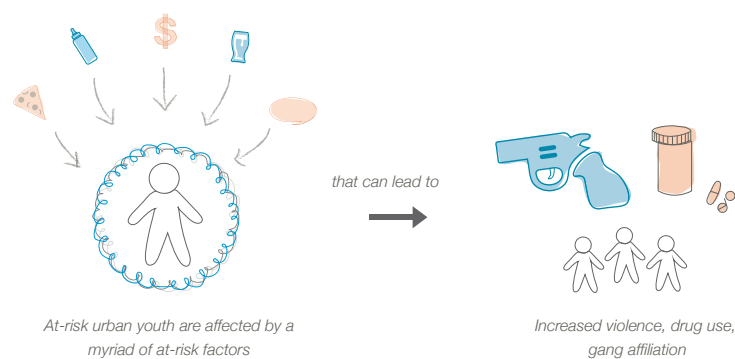
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for more information

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*At-risk urban youth are characterized as adolescents who face disadvantages determined by a level of poverty and social and family conditions whilst living in an urban community* >> UN-HABITAT

fig 4.1 At-risk factors lead to risky behaviors in youth

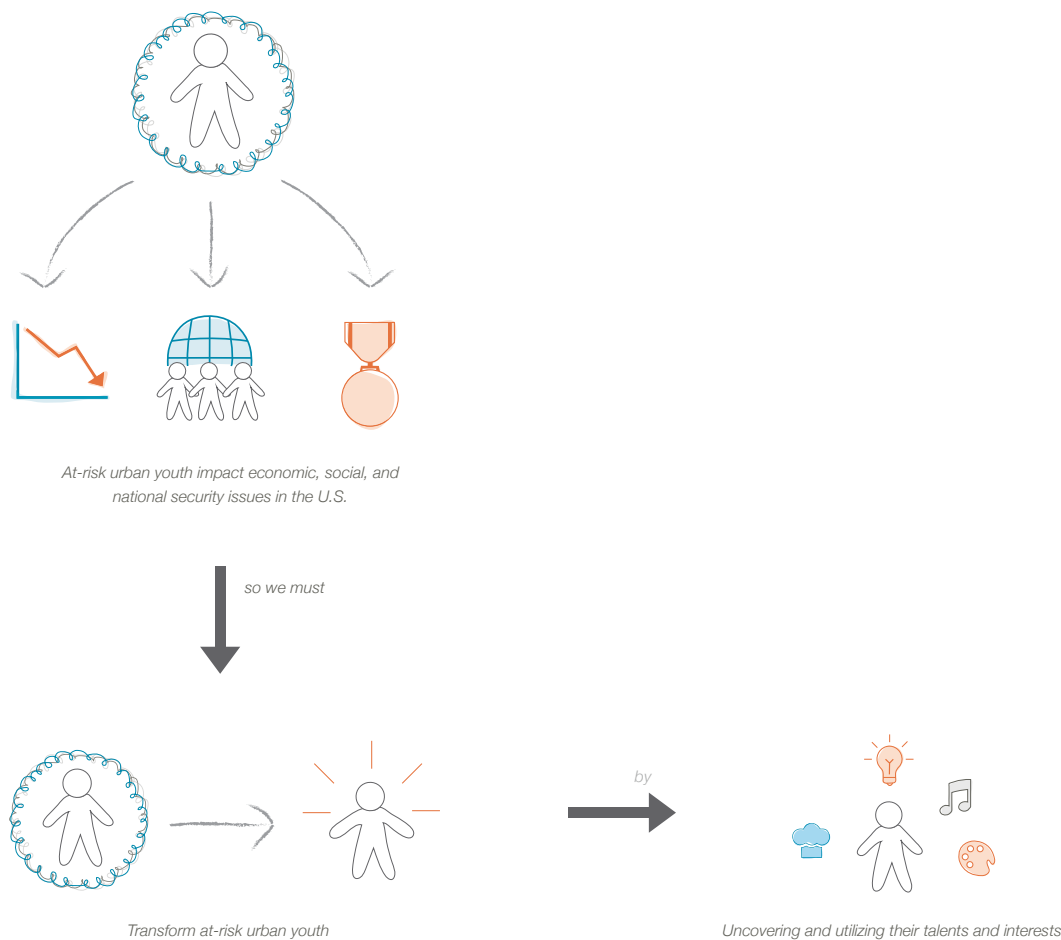


The existence of an at-risk youth population in our country has become a nationwide problem that has “social and economic implications for individuals and for society” (Bonilla, 1993). Investing time and energy in the struggling at-risk youth population today is a necessary step in creating a stronger and more competitive future for the entire youth population in the United States. By not doing this, we are impacting a large number of retired individuals who will be relying on this next generation of youth to take over the progression and growth of our society. Shirley E. Wells, author of *At-Risk Youth Identification, Programs, and Recommendations*, states that, the abandonment of the at-risk youth population is also placing an economic burden on our society, which is felt in increased taxes to support welfare programs, fight crime, and maintain special programs, such as teen parenthood prevention (Wells, 2). Many aspects of society are impacted by the abandonment of the at-risk youth population including the labor market, which youth play a critical role in as they approach adulthood and are competing for jobs.

The increasing number of at-risk youth is concerning because they are not entering the competitive job market, and therefore have a greater impact on the labor market. Robert F. Kolberg, a researcher in the field of at-risk youth, states:

If our economy is to grow as it is capable of growing, we must be able to use the talents of virtually all young people, because the numbers coming into the labor force is declining. Yet the percentage of those young people who are at-risk is increasing (Kolberg, 95). (refer to figure 4.2):

fig 4.2 At-risk youth greatly affect society in multiple ways



Addressing the unemployment problem among the at-risk youth population can have a ripple effect in reducing crime, drug use, and other undesirable forms of behavior negatively impacting society (Kolberg, 97).

The existence of an at-risk youth population in the U.S. also has an impact on national security. Currently, one in every nine young people is needed in order to sustain the military's strength through serving in our nation's navy, army, marines, and other armed forces. In 10 years, due to the drop in the non-risk youth population, the military will need one in three persons to preserve the country's strength. Kolberg states, "If current rates of illiteracy, unemployment, illegitimate pregnancies, and drug and alcohol abuse among our youth do not decline, there simply will not be enough qualified young people to go around" (Kolberg, 97).

Due to the impact that at-risk urban youth have on social, economic, business, and national security issues in the United States, it is a necessary duty for our society to see to it that they transform from being at-risk to demonstrating potential, which can be done by uncovering their natural abilities. Once at-risk youth have identified their talents and interests, they will then be able to utilize them in order to reach their full potential and in turn, live more fulfilled lives.

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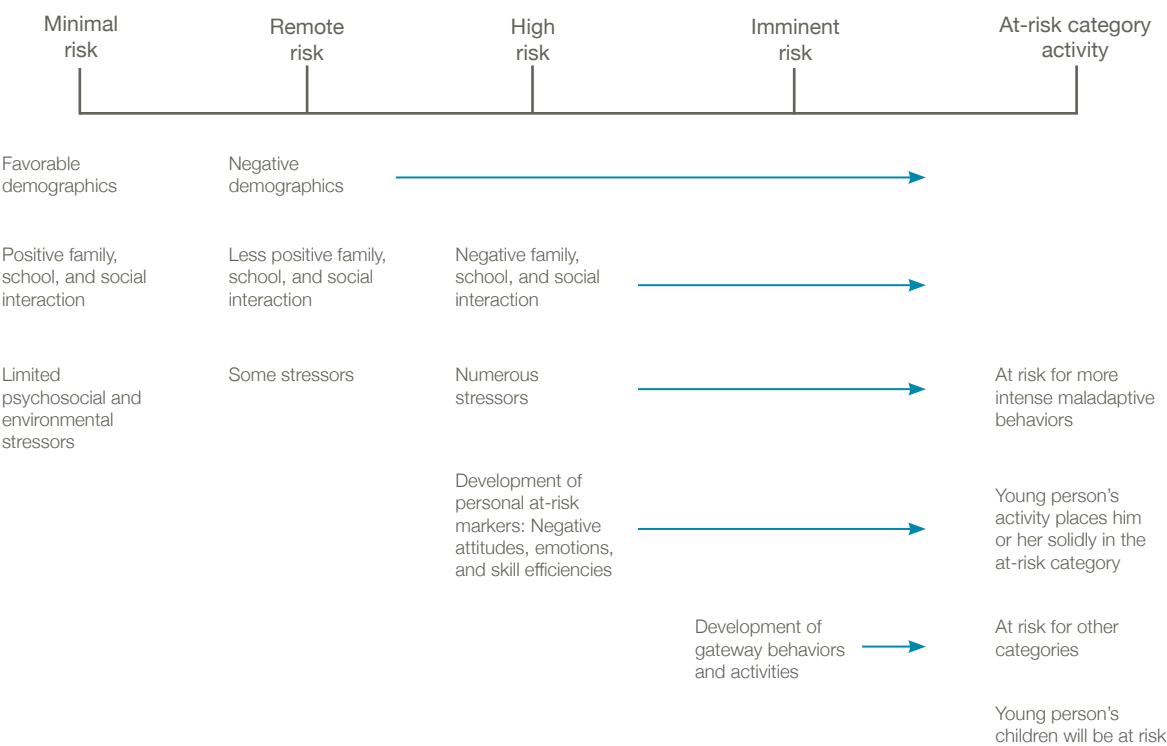
*If current rates of illiteracy, unemployment, illegitimate pregnancies, and drug and alcohol abuse among our youth do not decline, there simply will not be enough qualified young people to go around"*

>> William Kolberg

4.2 >> Factors and assessments of at-risk youth

Based on research done by Dobizl, At-risk urban youth are determined to be “at-risk” through utilizing several behavioral assessments including a 105-item checklist called the Behavior Assessment Form. This assessment is conducted within educational systems where the following areas are examined: academic performance, attendance, overall behavior, physical symptoms, illicit activities, extracurricular activities, and crisis indicators, such as being victims of abuse or threats. The information is then used to structure how teachers interact with students and deliver their instruction in order to ensure that “at-risk” students do not drop out of school (Dobizl, 24). Another way to determine if a youth is “at-risk” is the utilization of the “At-Risk Continuum” as found in *At Risk Youth: A Comprehensive Response*, a book that provides conceptual and practical information professionals will need to adequately prepare for working with at-risk youth. This continuum outlines the descriptive characteristics that correspond to different levels of risk along the continuum of Minimal-Remote-High-Imminent Risk (refer to fig. 4.3), and the associated at-risk category activity (McWhirter, 7).

fig 4.3 At-risk factors lead to risky behaviors in youth

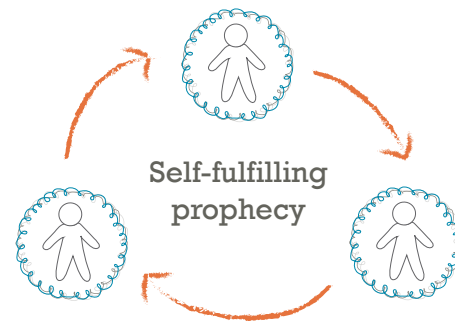


Common factors that have been found through assessments, such as the Behavior Assessment Form and the At-Risk Continuum, that place youth in an at-risk category include: poverty, teen parenthood, drug/alcohol abuse, poor health/nutrition, deficiency in English language, low-self-esteem, inadequate opportunities, loss of hope for future, and lack of life goals, as stated by Dobizl (Dobizl, 8). Monica Shawn, an associate professor at the Institute of Public Health, examines how urban youth who live in disadvantaged areas are more likely to engage in risky behaviors and be deemed at-risk. These risk behaviors include engaging in vandalism, violence, gang violence, weapon use, and drug selling (*refer to figure 4.1*) (Shawn, 227).

#### **4.3 >> At-risk urban youth unawareness of their talents**

In addition to the common factors found through the aforementioned assessments, at-risk urban youth are often found to be living in disadvantaged communities plagued by poverty, gang violence, and inadequate opportunities. As stated in *At Risk Youth: A Comprehensive Response*, the social and economic environment in which children grow is a significant exosystemic predictor of their overall well-being. Children's education, later employment, future earnings, and health greatly depend on their families' socioeconomic status. As a result of living in extreme poverty, families demonstrate a wide variety of problems among their children and youth (Garbarino, 1998). Low socioeconomic status is also related to juvenile delinquency (Jarjoura, Triplett, & Brinker, 159) and is the strongest predictor of teenage pregnancy (McWhirter, 30).

Those from low socioeconomic backgrounds have a greater tendency to experience lowered expectations (Hanson,160). According to Good & Brophy, two psychologists who provided some of the first studies to examine teacher practice and student outcomes, urban children are likely to be labeled as “at-risk”, and therefore this communicates and fosters low expectations, which can produce a negative self-fulfilling prophecy. This occurs when individuals internalize inaccurate expectations, which causes the inaccurate expectation to become a reality. According to Good and Brophy, due to the low expectations set, at-risk urban youth can experience an erosion of self-confidence, motivation, and academic success, which can hinder their access to quality educational opportunities, learning, achievement levels in school, and the development of a positive self-perception (Good & Brophy,1997). In essence, at-risk urban youth are found to be living in and experiencing conditions that put them into the category of being “at-risk”. This leads to a sense of expected failure, and ultimately the youth experience a negative self-fulfilling prophecy (*refer to fig. 4.4*). Since at-risk urban youth are continuously living in the same conditions that are negatively impacting their lives, this traps them in an uninterrupted cycle of expected failure, which is keeping them from reaching their full potential.



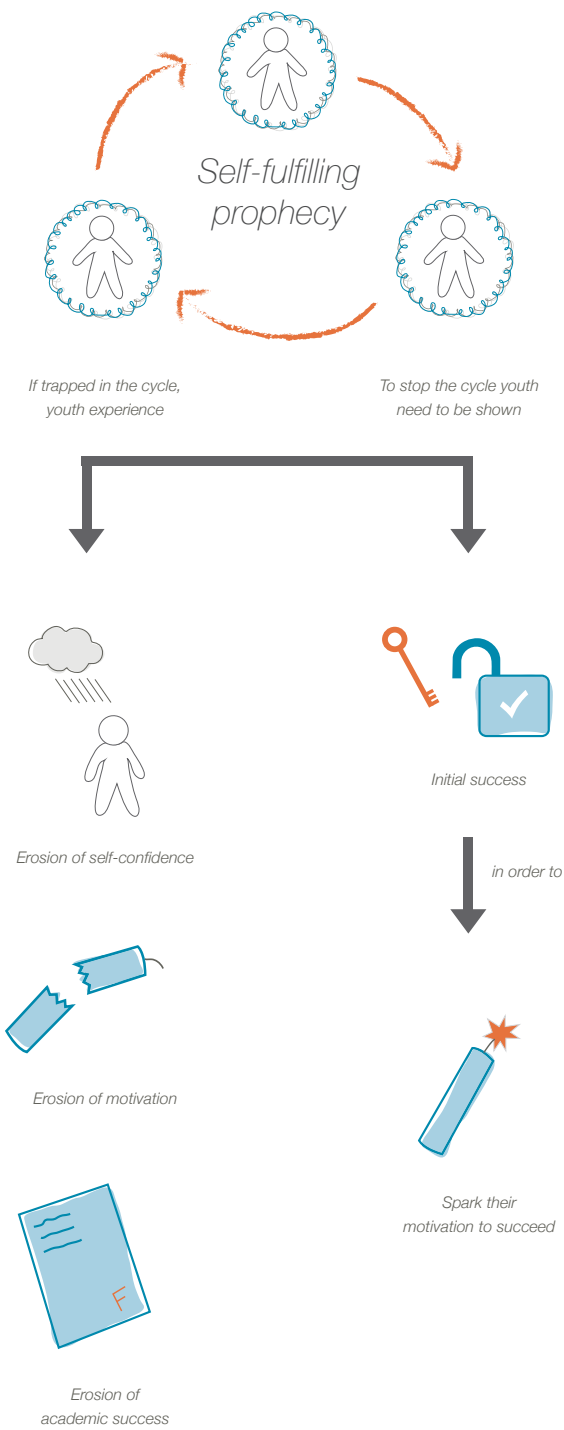
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*Youth are trapped in an uninterrupted cycle of expected failure, which is keeping them from reaching their full potential*



Due to the self-fulfilling prophecy that at-risk urban youth are experiencing, they are not being given adequate opportunities to experience initial successes, which can show them they have the ability to be good at something that they are interested in. “Initial success” is defined as a small display of engagement with interest areas and hobbies that increase self-esteem and a sense of accomplishment thus stimulating the motivation to succeed (Mcmillian & Reed, 139).

fig 4.4 Self-fulfilling prophecy implications



According to Gewirth, a professor of philosophy at the University of Chicago,

“Self-fulfillment consists in carrying to fruition one’s deepest desires or one’s worthiest capacities. It is the bringing of oneself to flourishing completion, an unfolding of what is strongest or best in oneself, so that it represents the successful culmination of one’s aspirations or potentialities” (Gewirth, 3).

Giving at-risk urban youth an opportunity to experience small initial successes can in turn stimulate their motivation to identify their talents and interests and engage with them (refer to figure 4.5). Based on the theory of self-fulfillment by Gewirth, identifying what one is talented and interested in is a necessary step to reaching self-fulfillment. If at-risk urban youth were able to uncover and utilize these talents and interests,

fig 4.5 Motivation spark



During a group interview session conducted with six educators at Crispus Attucks Medical Magnet School in Indianapolis, IN, it was discovered that there is very little being done to assess talents and interests in the school's at-risk youth population, and of the students who attend Crispus Attucks, 80% live below the poverty line. Principal Stephanie Nixon stated during the group interview, "I would definitely categorize our students to be at-risk." Beyond the standard aptitude tests and a brief interview the school's guidance counselors have with the students, there are not adequate opportunities for youth to experience initial successes in relation to their talents and interests.

<sup>†</sup>Refer to *Project Description* for more information on Crispus Attucks Medical Magnet School in Indianapolis, IN

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These initial successes spark the motivation that the teens need to then find out what their natural capabilities and interests are. If the youth are able to engage with those talents and interests then they should be able to lead more fulfilling lives as a result.

As stated by McMillian & Reed, professors at the School of Education, Virginia Commonwealth University, success is the precursor to a higher motivation to succeed, and therefore at-risk urban youth need to see the initial success in order to be motivated to further that success (McMillian & Reed, 138). During the group interview held at Crispus Attucks, the educators explained that this initial success is not being demonstrated to the youth due to a lack of adequate support systems, as well as effective and systematic ways of identifying their talents and interests.

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*Success is the precursor to motivation*

>> McMillian and Reed

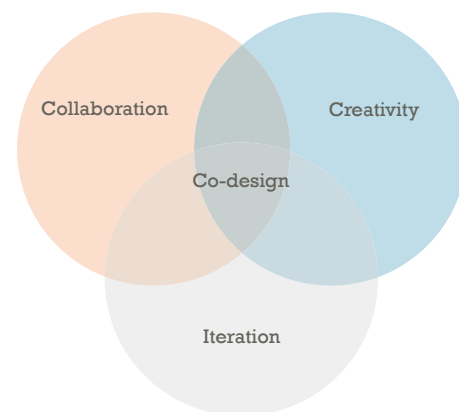
#### 4.4 >> Co-design as an approach to uncovering latent talents and interests

Co-design is a methodology or a process where designers and people embedded in the context, work collaboratively in the design development process to create holistic solutions to problems (Sanders & Stappers, 2008).

Liz Sanders, a leading researcher in the field of co-design, defines it as "...the creativity of designers and people not trained in design working together in the design development process" (Sanders & Stappers, 2008).

In order to positively impact the lives of at-risk urban youth, collaborative efforts are needed in which youth and designers work together. This collaboration enhances the creativity and exchange between people in the process and ultimately provides a more holistic solution (Mattelmaki, 2015).

Gewirth states that an important part of becoming a self-fulfilled person consists of having friends and other associates with whom they share mutually appreciated values (Gewirth, 195). By utilizing co-design to uncover latent talents and interests, at-risk urban youth will work collaboratively with each other to make or produce a specified outcome. This process, in which the teens will work through collaboratively, will carry them further toward self-fulfillment, as described by Gewirth.



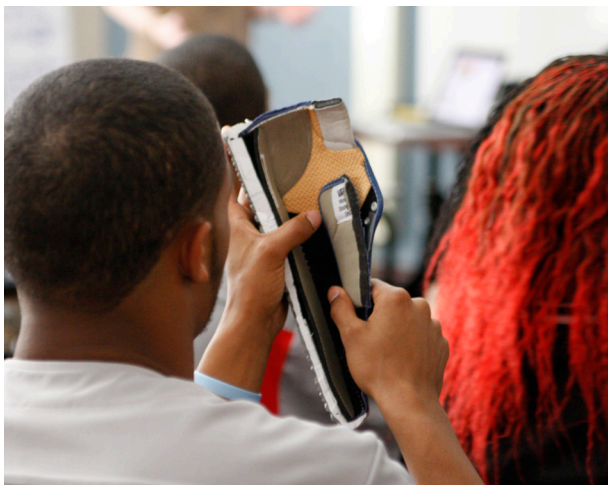
Co-design emphasizes the notion that all people are creative (Sanders & Stappers, 5). This is not a commonly held belief, however, this is an important part of demonstrating to at-risk urban youth that they have the ability to engage in a collaborative process of making and creating. In fact, Sanders describes the collaborative act of making, telling, or enacting as the place in which innovation and change usually occurs.

Co-design also provides the opportunity to demonstrate initial success to at-risk urban youth because it allows for designers to push participants to go further than they might by themselves, as stated by McDougall, an internationally acknowledged pioneer in the field of co-design and stakeholder engagement (McDougall, 2). Helping guide the youth through the process is important so that they can reach success in identifying their talents and interests, and designers possess the skills needed to do this. This area of active guidance is known as design facilitation. Design facilitation<sup>+</sup> includes having the ability to conduct creative processes (Sanders & Stappers, 24) and lead and guide participants while providing scaffolds to encourage creativity (Sanders & Stappers, 11, 2008). Utilizing co-design gives designers and those involved in the lives of at-risk urban youth the opportunity to work collaboratively in the design development process to ultimately guide youth toward self-fulfillment.

<sup>+</sup> **Design Facilitation**  
is the bringing of  
multiple voices together  
to address design  
challenges and delivery  
of [innovative change]  
(Body, 2008).

Over time, more programs and initiatives have launched in order to improve at-risk youth lives through utilizing co-design, or components of co-design, such as a creative process of making or creating and collaboration. Program leaders are able to teach necessary skills that youth can leverage to identify their needs and desires.

Tread Project is one such program, a seven-week design class that aims to teach responsibility, empowerment, and creative problem solving to 25 high school students in inner-city Cincinnati. The program was envisioned as a way for students to engage with a curriculum that would empower them through footwear design. This was a channel that the founders felt would be relevant to the teens given their passion and interest in footwear. Twenty-five 10th graders at Hughes STEM High School in Cincinnati, 85% of whom are below the poverty line, participated in the program. The founders of the project claim that the point of the program was not to create the next generation of designers, but to give students a crash course in how they can take their passions and leverage them to determine their futures.



*At-risk urban youth of Cincinnati take part in a seven week design class known as Tread Project*



After the program, Hughes saw a 30% increase in honor roll achievement by the youth who participated in the program (Start an Education, 2011). By combining the elements of making/creating, design iteration, and collaboration, this program was able to demonstrate initial success that at-risk urban youth need in order to spark their motivation to succeed.

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*Students were given a crash course in how they can take their passions and leverage them to determine their futures*

Project H, currently based in California, is also another creative initiative which its founder, Emily Pilloton, describes as striving to amplify the raw brilliance of youth, transform communities, and improve K-12 public education from within. The program does this by using creativity, design iteration, and hands-on building to give youth the creative, technical, and leadership tools necessary to make positive, long-lasting change in their lives and communities. Youth-led groups engage in building projects such as an award winning 1,000-square-foot farmers market structure, iconic downtown landmarks, farm stands, playgrounds, school gardens, an obstacle course, public chicken coops, and their own learning facilities. Studio H is a program born out of the Project H initiative, where 8th-11th graders apply their core subject learning in school to design socially transformative projects such as a pop up park, laser-etched skateboards, sculptural concrete public furniture, roadside farm stands, and more. Project H states that through design iteration as well as making/creating, students are able to develop skills necessary for their own success (Project H, 2011).

---

*Project H uses creativity, design iteration, and hands-on building to give youth the creative, technical, and leadership tools necessary to make positive, long-lasting change in their lives and communities*



*Project H students collaborating on a youth-led community-based building project*

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Visit [www.projecthdesign.org](http://www.projecthdesign.org)  
for more information



These programs are an example of combining the ideas of collaboration, hands-on creating and making, and engagement with an iterative design process to positively transform the lives of youth. At-risk urban youth are in particular need of being shown that they are able to engage in activities and environments that programs like these provide, in order to realize their talents and interests and therefore their potential. Once the youth are shown their potential this can spark their motivation to discover and engage with their talents and interests and lead more fulfilling lives as a result.



*Youth-led groups engage in various building projects*

## { 5 } Limitations

At-risk urban youth are not experiencing the initial success needed to spark their motivation to uncover their talents and interests. According to Gewirth's definition of self-fulfillment<sup>†</sup>, the youth cannot move towards a state of self-fulfillment without this knowledge. The reason youth are not experiencing this initial success is due to two factors. First, they do not have an adequate support system such as parents, teachers, and other role models, that are there to show them that they, in fact, can be good at something. Secondly, they have ineffective systematic ways of identifying their talents and interests.

The aim of this research is not only to identify any existing systematic ways that at-risk urban youth's talents and interests are being assessed, and how to make these more effective utilizing co-design, but also create new ways for uncovering youth's talents and interests through utilizing co-design. This research will not focus on improving youth's support system structures and will not explore family relationships.

<sup>†</sup> Refer to page 10 to refer to Gewirth's definition of self-fulfillment

Uncovering talents and interests is an important part of living a more fulfilled life. Therefore, the focus of this research is to explore co-design as a way to uncover latent talents and interests in at-risk urban youth in

order to lead to self-fulfillment. This study is concerned only with a process for uncovering talents and interests as a result of four factors.

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*The focus of this research is to explore co-design as a way to uncover latent talents and interests in at-risk urban youth in order to lead to self-fulfillment*

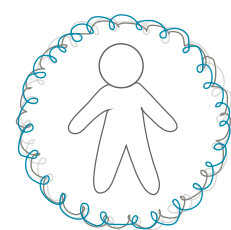
First of all, youth are relatively young, between the ages of 12 and 17, and have had little chance to live a “deeply satisfying and fruitful” life. Secondly, there is very little scholarly research about self-fulfillment in general and the path or steps one must take to reach self-fulfillment. Thirdly, to have at-risk urban youth reflect on their lives, no matter how short, would be a difficult and possibly upsetting task. Many of the youth have faced hardships throughout their lives and looking back at those negative experiences and memories could potentially reinforce the self-fulfilling prophecy discussed previously. And lastly, this research is only examining how co-design can start the process of self-fulfillment<sup>†</sup>. Therefore, due to the nature of co-design and project time constraints, no assessment measures will be utilized to gauge how fulfilled the youth feel.

<sup>†</sup> Refer to *fig. 5.1* for a summarized list of the research limitations

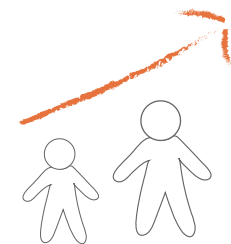
A few assumptions are being made throughout this research about at-risk urban youth and their need for self-fulfillment. It is assuming that these teens are in fact not on a path toward self-fulfillment because they are not aware of their talents and interests. It is also assumed that at-risk urban youth want to be made aware of their talents and interests so they can then further engage with them.

Ultimately, this research is an exploration of how co-design can help to uncover latent talents and interests in at-risk urban youth in order to eventually lead to self-fulfillment. It is not the intention to explore other paths one may take to reach self-fulfillment, but instead to explore the ways in which co-design components, such as collaboration and hands-on activities, can positively impact at-risk urban youth lives. It is not within the scope, nor is it the goal, of this research to evaluate the co-design activities' actual affect on at-risk urban youth's self-fulfillment. In order to do this, further research would be required to measure the affects on youth and whether or not they feel more fulfilled as a result of uncovering their talents and interests.

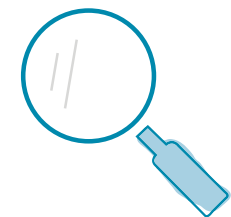
fig 5.1 Research limitations



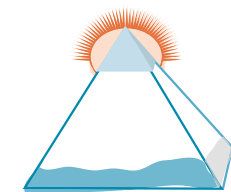
Chaotic life



Relatively young



Little research on self-fulfillment



Co-design only starts the process of self-fulfillment

## { 6 } Project Overview

### 6.1 >> Action based research

For this project, an action-based research approach was applied to investigate how the use of co-design can help to uncover at-risk urban youth latent talents and interests, and use those to develop an actionable plan for them to fulfill their future goals related to these. Action-based research is defined as, “inquiry done by or with insiders to an organization or community, but never to or on them” (Herr, 2005). It makes action central to the research and therefore is disparate of traditional research, which tends to take a more distanced approach to research settings (Herr, 2005). Action based research is generally characterized by the following components:

- The study takes places in the natural setting
- Before the study begins the research examines their own biases in order to remove them
- Throughout the study multiple forms of quantitative or qualitative data are collected
- Findings are typically rich in description
- Process not product is stressed

- Inductive analysis is ongoing
- Meaning is derived from data analysis, findings, and conclusions
- Findings inform practice

Currently, action research is one of the few approaches which sets out to embrace principles of participation, reflections, empowerment, and collaboration of people who are interested in improving upon their social situation (Berg, 2004). Liz Sanders further explains the role of a designer as one who is responsible for leading, guiding, and providing scaffolds to encourage people's creativity (Sanders & Stappers, 2008). This parallels nicely to the principles of co-design where youth collaborate throughout the design development process with a designer, whose purpose includes guiding them as well as empowering them through prompting and group reflection.

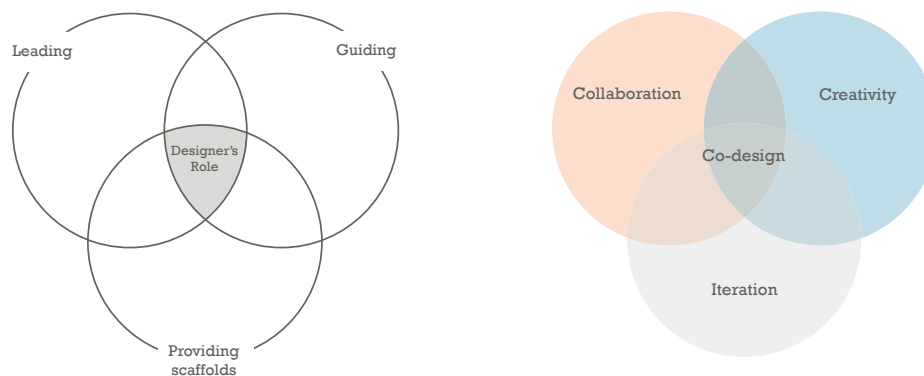
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*Designers are responsible for leading, guiding, and providing scaffolds to encourage people's creativity*

>> Liz Sanders and Pieter Jan Stappers

---

fig 6.1 Designer's roles as it relates to co-design



## 6.2 >> Design Process

Vijay Kumar proposes a model of the innovation process with four distinct phases, *research*, *analysis*, *synthesis*, and *delivery* (Dubberly, 2008) (Refer to fig. 6.2 for Kumar's design process model). He frames *research* as the phase in which the designer gets to know the user or of the persons who will ultimately benefit from the solution. A key objective in this phase is to be able to extract the most valuable insights from the researcher's observations. Also within this phase, designers get to understand the context and generate insights based on observations of the environment (Kumar, 2009).

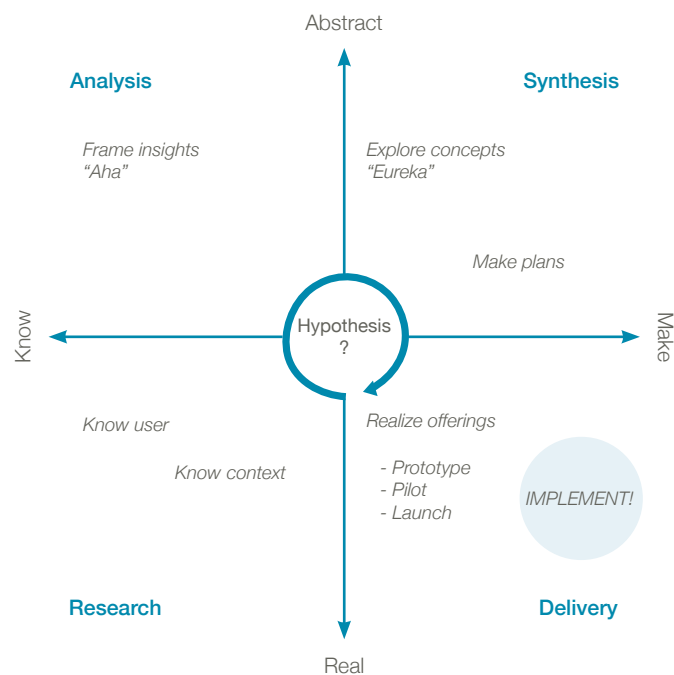
Vijay Kumar proposes a model of the innovation process with four distinct phases, *research*, *analysis*, *synthesis*, and *delivery* (Dubberly, 2008). He frames *research* as the phase in which the designer gets to know the user or of the persons who will ultimately benefit from the solution. A key objective in this phase is to be able to extract the most valuable insights from the researcher's observations. Also within this phase, designers get to understand the context and generate insights based on observations of the environment (Kumar, 2009).

After data collection through the research phase, the next step is to derive meaning from what has been found, through the *analysis* phase. This is the phase in which innovators sort, cluster, and organize data gathered in the research phase and begin finding important patterns. A key outcome of analysis in this model is to conduct multiple analyses of data in order to yield additional patterns and insights.

Once insights have been framed, researchers take these and use them to identify promising opportunities and explore new concepts in order to shape or improve upon the solution at hand (Kumar, 2009).

After insights have been framed through analysis, these are taken and translated into changes that must occur to the new solution. *Synthesis* is the period, which the designer begins to generate ideas for the future inspired by the insights gained throughout research collection. Design synthesis is an abductive sensemaking process of manipulating, organizing, pruning and filtering data in an effort to produce information and knowledge (Kolko, 2009). Once a new framework and ideas have been generated through synthesis, these are then implemented into the solution in order to strengthen and refine it.

fig 6.2 Design process phases by Kumar

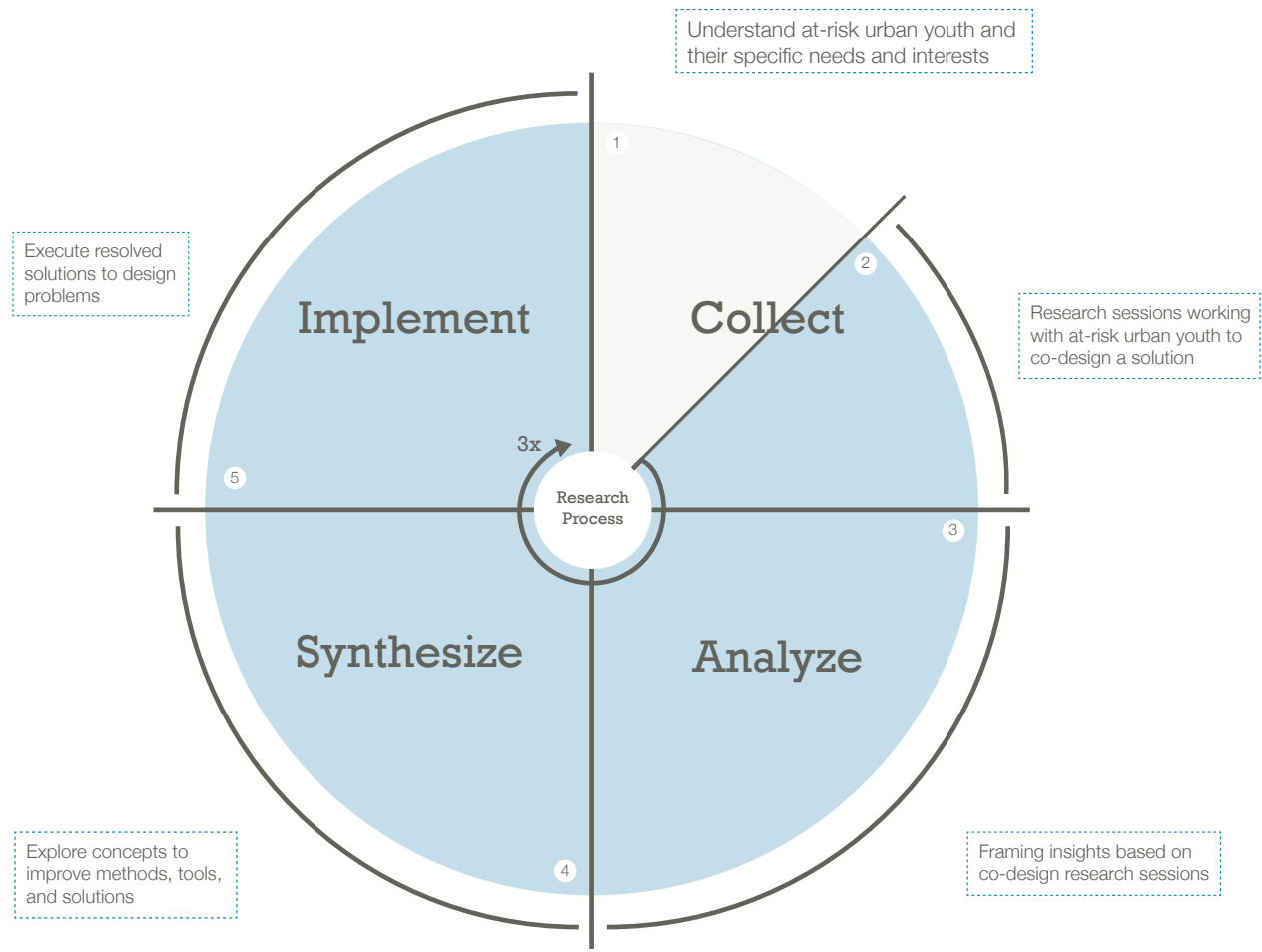




Lastly, Kumar describes a *delivery* phase, which encompasses sub-phases of realizing offerings, prototyping, piloting, and launching the new solution. This is where designers start with a new fully synthesized solution or framework, prototype and test it out in a pilot session with mock-participants and then finally launch. This step is meant to ensure that solutions are purposefully built around people's experiences and that they can provide real value (Kumar, 2009).

For the purpose of this research, a process was derived from Kumar's model with four distinct phases, which will be referred to as *collection*, *analysis*, *synthesis*, and *implementation* (refer to figure 6.3 for a visual representation of the design process). Within the collection phase, qualitative research methods and tools are utilized in order to understand at-risk urban youth and their specific needs in relation to the co-design process. The analysis phase is to make sense of the data gained and to frame insights based on patterns identified. After valuable insights have been gained, the synthesis phase serves as a platform to improve upon the expected solution by exploring concepts to improve methods and tools. Finally, implementation is where the new and improved solution is executed and retested with at-risk urban youth. This process of collection-analysis-synthesis-implementation took place three times in order to iterate and improve upon the solution.

fig 6.3 Design process



### 6.3 >> Research context

In order to conduct participatory action research, which was previously discussed, this research involves at-risk urban youth from Crispus Attucks Medical Magnet High School in downtown Indianapolis, IN. Contact was initiated with the Principal of the school who allowed access to the school environment. After initial contact, two other educators at Crispus Attucks along with the Principal, served as the main contacts for access to the students and resources within the school, throughout the research.

According to the school's website, before Crispus Attucks was built, Indianapolis had a number of segregated elementary schools, but African Americans were able to attend public high schools. With the rise of the Ku Klux Klan and demands of segregationists, a separate high school was built only for African American students. Despite opposition, Crispus Attucks was built in 1922 and remained an exclusively African American school until the 1970s when busing for racial integration<sup>+</sup> began (Crispus, 2015). To this day the population of Crispus Attucks' student base remains primarily African American and socioeconomically disadvantaged youth.

<sup>+</sup> Busing for racial integration, or desegregation busing, was the transportation of students to schools in such a way as to redress prior racial segregation of schools

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*We don't have much in place to assess talents and interests in our students. We are too busy here.*

>> Principal, Crispus Attucks

After meeting with the Principal, along with five other educators, it was clear that Crispus Attucks School would appropriately serve as a context for research. This was mainly due to the high level of at-risk students who attend the inner-city school, as well as the confirmation that the school has very little in the way of identifying student's talents and interests due to the high level of students that each guidance counselor must attend to. Also, educators at Crispus Attucks face problems related to student's risk seeking behaviors every day such as, disobedience and non-compliance, and simply do not have time to attend to other activities such as the uncovering of talents and interests.



*Crispus Attucks Medical Magnet High School in Indianapolis, IN*

# { 7 } Design Process

## 7.1 >> Collection overview

Once the research context has been chosen and a problem statement has been defined, designers utilize **qualitative research**<sup>+</sup> methods in order to engage in the collection phase. These methods are used to extract data in order for the designer to draw meaningful insights to later develop a holistic and appropriate solution.

During collection, a central role is that of a design facilitator of co-design activities and methods. The at-risk urban youth were led through a series of pre-determined steps in order for the cohort to craft a process for creating an actionable plan for them to fulfill their future goals related to the talents and interests they uncovered.

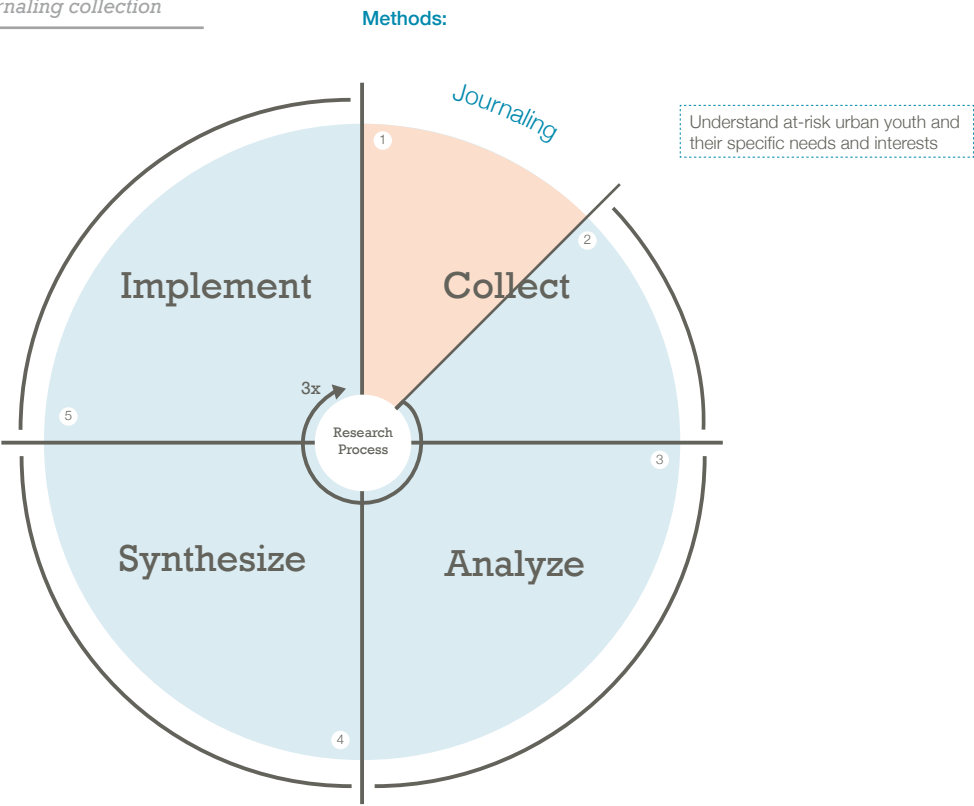
<sup>+</sup> Qualitative research is a non-traditional approach to research that ultimately involved analyzing and interpreting data “to discover meaningful patterns descriptive of a particular phenomenon” (Auerbach, 2003).

7.2 >> Collection methods

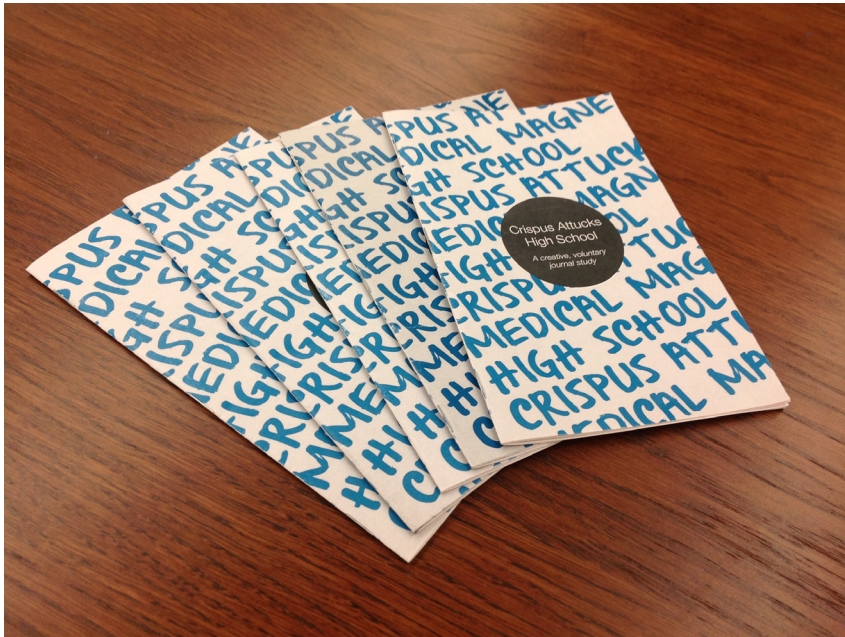
For this research, collection was broken up into two parts. The first round of collection was a journaling exercise with the intent to gain the information necessary to shape future co-design activities and methods with youth. In order to select these activities and methods, it was important to understand what kinds of engagements were appropriate for at-risk urban youth. (Refer to figure 7.1)

To determine appropriate activities and methods, collection started with a **journaling** study, adapted from the diary studies method developed by Bella Martin, where five at-risk urban youth from Crispus Attucks anonymously filled out journal booklets, which prompted them to compare and contrast their current life and ideal life. The booklets were given to students by a teacher, who then collected the journals once they were complete. The response from the journals were then analyzed in order to extract the core components that needed to shape the co-design sessions with youth.

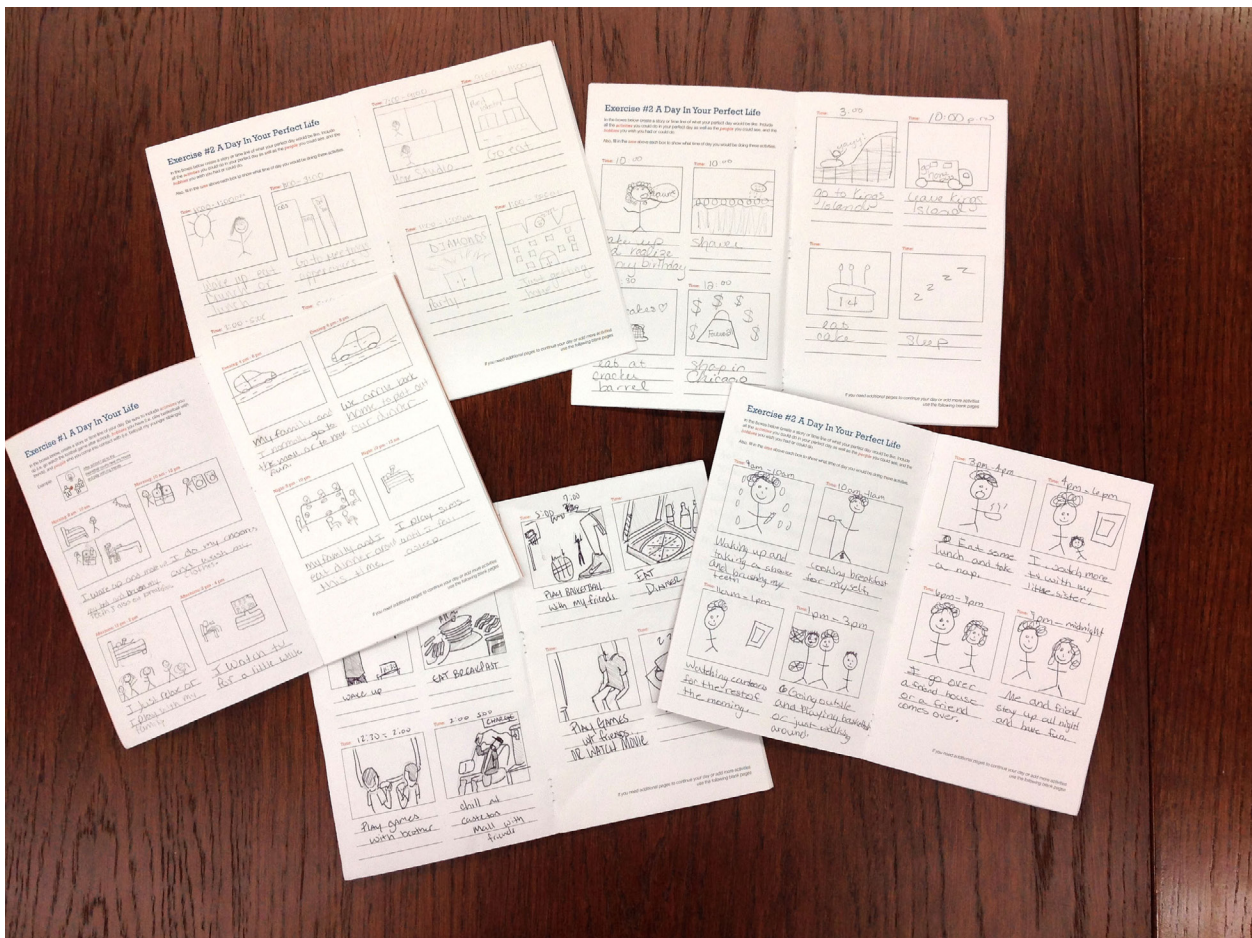
fig 7.1 Journaling collection







† Journals are artifacts that allow people to expressively convey personal details about their daily life and events to designers. They are used for collecting information from participants about their thoughts, feelings, or behaviors (Martin, 2012).



Core components included:

- Social and collaborative
- Iterative
- Creative
- Physical movement in space
- Current and future benefits
- Demonstrable outcomes to youth
- Relaxing and fun
- Self-driven with limited boundaries
- Affirmation
- Encouragement



These activity components were used to choose the co-design methods and activities that were designed for youth to engage in within the second round of collection.

After appropriate co-design methods and activities were chosen, three collection sessions were scheduled at Crispus Attucks in order to engage with youth. These sessions were scheduled far enough apart to account for analysis of data and synthesis of a new iteration of the process before a new implementation. Therefore, the implementation of the collection, analysis, and synthesis process occurred a total of three times throughout the research project.

During collection, at-risk urban youth were led through a series of activities and methods where they were worked collaboratively through a team-building exercise and then asked to explore what they are truly interested and talented in.



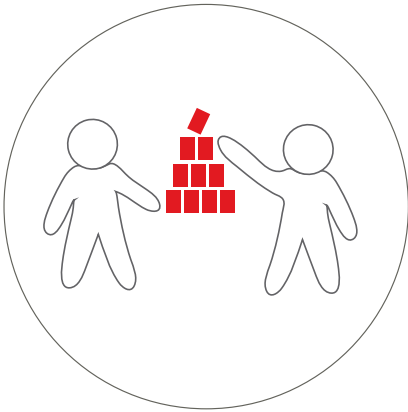
After the youth were able to identify their talents and interests they were prompted to connect these with underlying values and eventually specific goals that they have for themselves. These high-level goals were then turned into actionable plans for the youth to be able to follow in order to be guided toward a path to self-fulfillment. Below are the methods and activities youth were led through during the collection phase.

### 7.3 >> Methods for data collection<sup>+</sup>

#### Build-A-Tower

This activity, developed and utilized as a warm-up activity by Collabo Creative, is a fast paced collaborative activity where youth competed in teams to stack six-inch tall red plastic cups as fast as possible in order to build the tallest tower they could in a short amount of time. This activity was intended to increase the energy, enjoyment, and comfortability of the youth working in a team environment. Youth practiced their communication skills by working together within their teams in order to reach a common goal. This skill that they learned, along with supporting each other, became useful later in the session when they worked toward the common goal of making an actionable plan for their future while utilizing their uncovered talents and interests. an actionable plan for them to fulfill their future goals related to the talents and interests they uncovered.

Tools: Six-inch tall red plastic cups

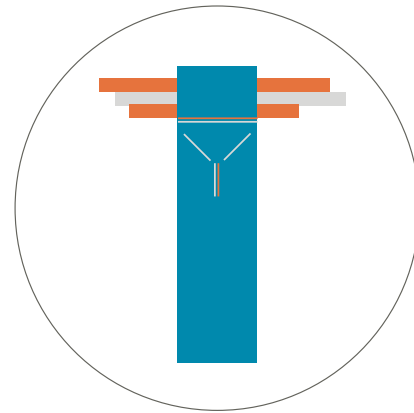


<sup>+</sup> Note that these methods and activities varied throughout the research and changed according to insights gained

### ***Totem Truths***

This activity, designed by Business Training Works, a company specializing in instructor-led soft skills training, is a creative icebreaker where sections of a “totem pole” are built utilizing different symbols and imagery in order to represent a particular person. In this case, the imagery and symbols used by youth represented their talents and interests. This activity allows for creative exploration of talents and interests by utilizing creative tools and supplies, and it enabled the youth to start thinking about what they are good at, what they like to do, and how those things relate to their future. Note that this activity was only used for the first collection research session and not for the subsequent two

Tools: Foam board for the totem sections, magazines, colored paper, post-its glue sticks, tape, markers, colored pencils, pens, sticker letters



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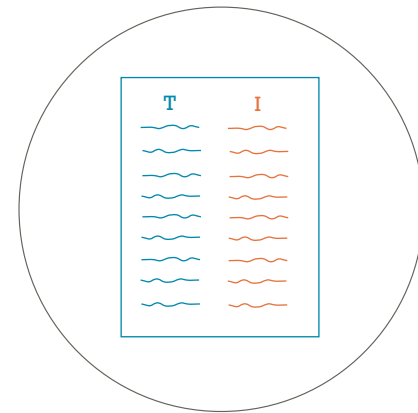
Visit  
[www.businessstrainingworks.com](http://www.businessstrainingworks.com)  
for more information

## Free-listing<sup>†</sup>

A generative activity where youth were asked to free-list their talents and interests, which entails writing as many talents and interests they could think of in a pre-determined amount of time. Throughout this *free-listing*, youth were prompted to think deeply about WHY they are interested in or talented at something. For example, if they are interested in dancing they were asked to identify what other interests related to dancing, such as hanging out with friends and being social.

Tools: Listing sheet,<sup>†</sup> pens

See appendix page 180 for listing template



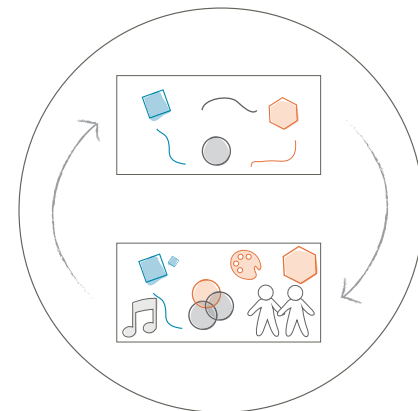
<sup>†</sup> This method is based upon the *free-listing* method described by Chauncey Wilson, user experience designer of the Autodesk AEC User Research Team.

## Collage

Design researchers use this method in order to enable participants to visually express their innermost thoughts, feelings, desire, and other aspects of their life that may otherwise be difficult to express using traditional means, according to Bella Martin, a design practitioner and author of Universal Methods of Design<sup>†</sup> (Martin, 2012). This allowed youth to explore their feelings and thoughts more deeply and consider how they came to know that they are talented at something or perhaps, why they are interested in a particular hobby.

Tools: 11x17 in. collage template, magazines, colored paper, post-its glue sticks, tape, markers, colored pencils, pens, sticker letters

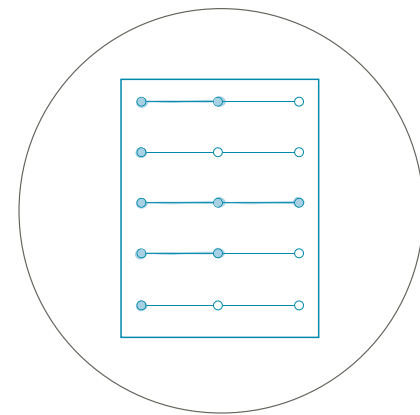
See appendix page 181 for collage template



<sup>†</sup> Universal Methods of Design is an useful survey of research and design methods used by today's top practitioners

### Semantic Differential

A semantic differential scale is a tool designed to measure people's attitudes towards a topic so that its deeper connotative meaning can be ascertained. They can help reveal meanings that are direct with one's experiences and beliefs (Martin, 2012). This activity was adapted from Bella Martin, in order to frame it as a "happiness scale" for at-risk urban youth to judge their talents and interests based on happiness.



After youth completed their collage, they were asked to transfer their talents and interests onto a "happiness scale" where they then ranked each talent and interest on a likert scale of 1-5 of how happy engaging with this makes them. Then, they were prompted to narrow their list down to three talents and interests that they thought they would likely interact with in the future. From there, a *refined collage* was made based off the three selected talents and interests.

Tools: Semantic differential sheet, pens

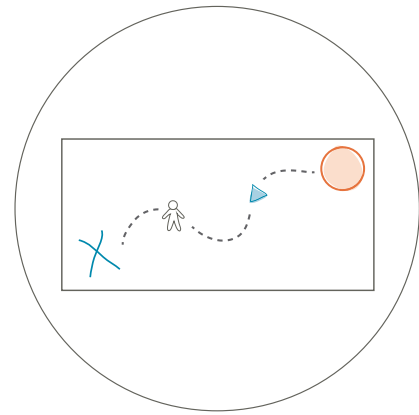
See appendix page 182 for  
semantic differential template

## User Journey Map

A *user journey map* is a visualization of how experiences the participants hope to have in the future, developed by Bella Martin. A *user journey map* was used in order to allow youth to visualize how they plan to accomplish their goals utilizing their talents and interests while considering people and resources that could help them along the way. The map served as a type of timeline for youth to follow when considering how they will get from where they are currently in their lives to where they would like to be. An 11x17 in piece of paper was given to youth in order for them to map out how they would accomplish their goals and dreams which could ultimately lead to more fulfilling lives.

Tools: 11x17 in. user journey map template, pens

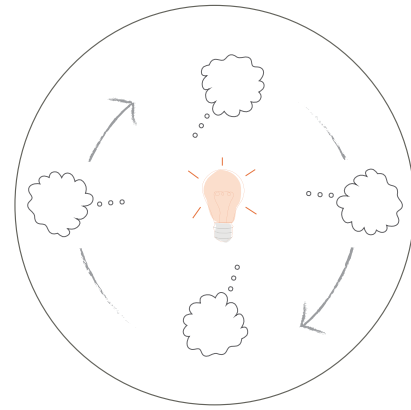
See appendix pg. # for user journey map templates



## Round Robin

Developed by the Luma Institute, an innovative human-centered design company, this is an activity through which ideas evolve as they are passed from person to person (Luma Institute, 2012). After youth created their *user journey maps*, they went through a series of three rotations, where they were prompted to add their own knowledge and suggestions to their peer's maps. *Round robin* activities allow for the generation of new knowledge by providing a formal for collective input. As each youth rotated, the maps grew and changed in order to uncover people and resources that they might not have originally thought of. This activity provided youth a much clearer picture of how they might accomplish their goals in the future.

Tools: Standard size post-its, pens, sharpies

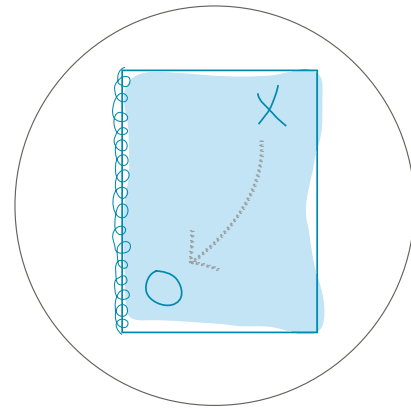


## Actionable Planning

This activity booklet was utilized for youth to transfer the high-level goals from their *user journey maps*, such as “graduate from high school” and break these down systematically into smaller, more achievable goals. This activity was adapted by Min Basadur, an innovator in the field of problem solving, to give youth a way to envision a path to accomplishing their goals with the help of people and resources along the way.

Tools: Actionable planning booklets

See appendix page 185-86 for Action planning booklet templates



## 7.4 >> Analysis overview

In order to make sense of data gained throughout the research process, the design researcher engages in a process of developing insights and changes in the research plan. This occurs by going through a process of identifying observations, making connections, defining patterns and relationships, and finally using those to develop meaningful insights. According to Hugh Dubberly, President of Dubberly Design<sup>†</sup> and talented design planner and teacher,

“We make sense of research by analysis, filtering data we collect to highlight points we decide are important or use tools we’re comfortable with to sort, prioritize, and order” (Dubberly, 2008).

Analysis is about understanding the observations gained from research and using those observations and understanding to build insights, which inevitably define and redefine the trajectory of a project. Once these insights are formulated through analysis, design researchers use them to synthesize the most appropriate solution to a problem.

The core competencies of designers<sup>†</sup> are appropriately suited to complete analysis methods, and although Sander’s definition of co-design states that users should be included throughout the entire span of the design process, youth were not consulted during this phase. This was due to the young age of participants who have not developed the competencies needed to engage in the process of analysis.

<sup>†</sup> Dubberly Design Office (DDO) is a ten-person consultancy focused on making hardware, software, and services easier to use through interaction design.

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Visit [www.dubberly.com](http://www.dubberly.com)  
for more information

<sup>†</sup> See appendix page 187 for a list of designer core competencies as stated by Chris Conley

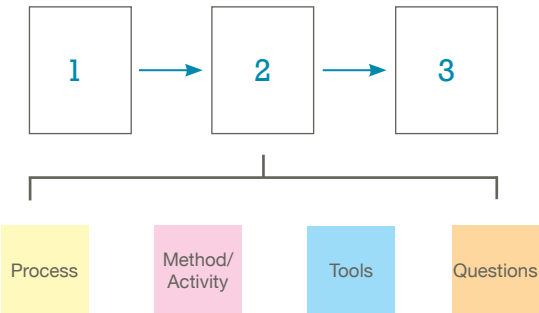


During this research project, three rounds of analysis were conducted. Each round took place after each phase of collection. First, research was externalized visually in sequential order so that the abstract concept of data could be broken down.

During this research project, three rounds of analysis were conducted, where each took place after every phase of collection. So that data could be altogether observed and analyzed, research was first externalized visually in sequential order. After externalization, a variety of analysis methods were utilized to organize the data, pattern-find, and develop insights. Outcomes from this process yielded changes to the research plan, which resulted in new iterations of the process, methods, and tools in order to strengthen and improve them. Methods for analysis included:

*Organizational process mapping*<sup>†</sup>

Adapted and synthesized from multiple methods, this method of analysis was used to create a systematic process of organizing the data based on sequential order and then developing observations of the research process, methods/activities performed, tools utilized, and questions posed. Designers employ tools such as sharpies and post-its to record observations and questions, externalizing the collected data onto large walls, including the physical tools used during research, tool templates, and photos.



<sup>†</sup> This method was adapted from several other analysis methods

## Affinity Diagramming

This is a process, developed by Bella Martin, used to externalize and meaningfully cluster observations and insights from research, which keeps the researcher grounded in the data as new iterations of the action plan are produced (Martin, 2012). Additional insights as observations and questions from the organizational process mapping method are clustered together into groups and subgroups based on affinity.<sup>†</sup> Once complete, areas of improvement or specific changes that must occur are specified and documented for the researcher to use to synthesize a new research planning framework.

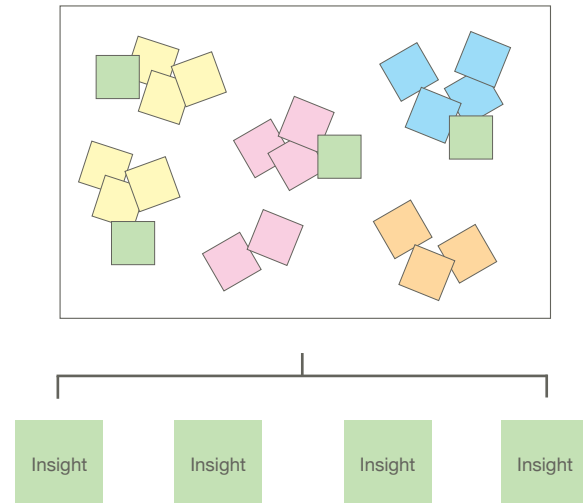
Tools for analysis:

Large wall space

Multi-colored post-its (regular and mini)

Black sharpies

Black pens



<sup>†</sup> Affinity means a similarity of characteristics suggesting a relationship between one of more components

## 7.5 >> Synthesis overview

After insights have been generated through the process of analysis, the researcher creates a new framework of what the future *could be* by synthesizing a new process for collection. Synthesis

is a phase of the design process where the designer generates and iterates on the current solution in

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*Synthesis methods are a way in which insights can lead to new, innovative, appropriate, or compelling ideas* >> Jon Kolko

order to improve upon it. It provides the opportunity for designers to reflect on the how the insights gained through analysis can inform the future solution. Jon Kolko, a writer and educator in the field of design, defines synthesis as a designer's "attempt to organize, manipulate, prune, and filter gathered data into a cohesive structure for information building" (Kolko, 2010). Synthesis methods are a way in which insights can lead to new, innovative, appropriate, or compelling ideas (Kolko 2010).

Once again, at-risk urban youth were not included in this process due to their lack of design competencies needed to engage in the process of synthesis. However, during the reflective periods of each research session, youth were asked for their feedback on the session; what they liked, what they didn't like, and why. The feedback gained through this prompting proved to yield very valuable insights and were highly considered when making changes to the session process.

When synthesis is conducted as a private exercise, sometimes there is not a visible output (Kolko, 2010).

To remedy this, the researcher mapped out all of the changes that were to occur in the next phase of collection on a large whiteboard, and then used those changes to synthesize a new process for collection.

At the end of analysis, there were insights and questions based upon the patterns derived from the documented research observations. From there, changes that needed to occur within the collection process were developed. These necessary changes were documented in order to synthesize and strengthen the next research session with the youth and ultimately the intended solution to the research question. The changes that were documented on the affinity diagram were gathered together and categorized by a color-coding system into five main categories;

Changes needing to occur in the session

1. Process
2. Methods/activities
3. Tools
4. Prompting
5. Environment

Once these were color-coded they were then used to synthesize a new research planning framework for the subsequent research session at Crispus Attucks High School.

Tools for synthesis:

Large wall space

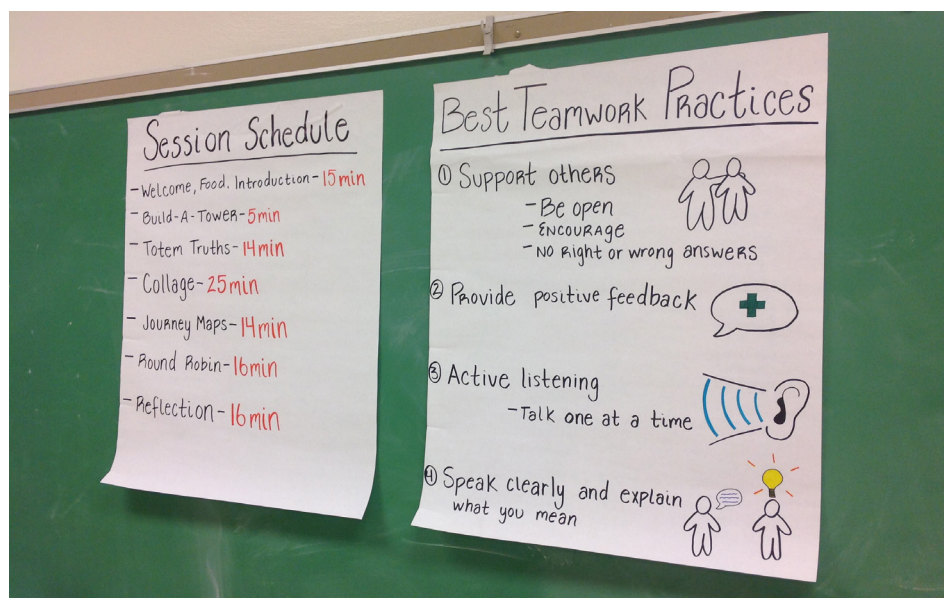
Multi-colored post-its (regular and mini)

Black sharpies

Black pens

## { 8 } Research Session #1

During the first phase of research collection, an after-school session was held at Crispus Attucks Medical Magnet School in Indianapolis, IN with five youth female students ranging from 16-17 years old. Upon the arrival of the youth, a brief schedule and an overview of “Best Team Practices” was presented to them. These are principles for how to best work within a collaborative team environment, including: supporting others, providing positive feedback, active listening, and communicating effectively.



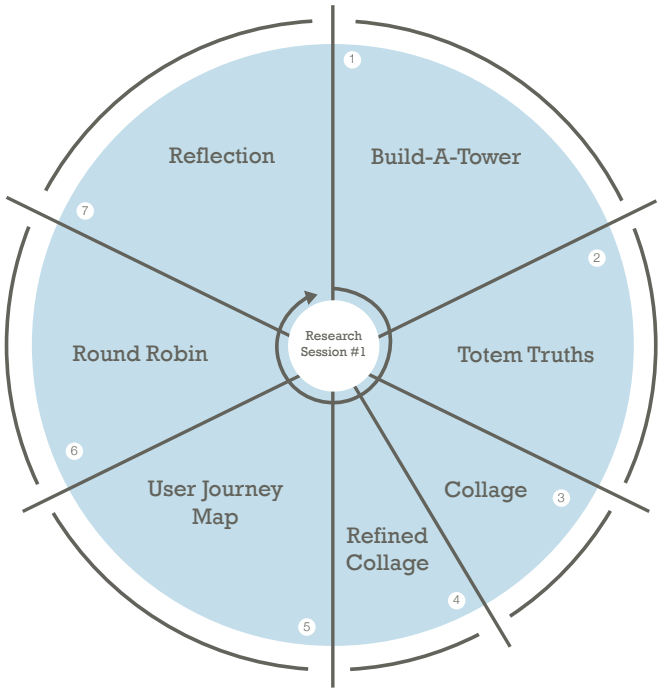
*Best Teamwork Practices introduced to youth in research session #1*

After an initial introduction with youth, they were led through a series of scaffolded activities (*refer to figure 8.1*) intended to uncover their latent talents and interests by utilizing their collaborative efforts and creativity. The following sections provide an overview of the first research session with at-risk urban youth at Crispus Attucks.

8.1 >> Session #1

Youth were welcomed into a large home-economics room in their own high school where they were first offered pizza and snacks before the session began. They then sat at one of the large tables in the middle of the room while the purpose and schedule of the session were explained to them. Youth were then introduced to the “Best Team Practices” and reminded to keep these in mind throughout the two-hour session. The following provides an overview of the activities youth participated in and tools they utilized.

fig 8.1 Research Session #1 process



### *Build-A-Tower*

This first activity served as a short warm-up where youth were split into two teams and competed to build the tallest tower utilizing red plastic cups. Youth were given five minutes to complete the task and in this time they went through several iterations of their towers toppling over and having to re-start the process over again. Part of the way through the activity one youth asked if it was okay to use supplies other than the red plastic cups, which the researcher granted permission for in order to give the youth the freedom to choose and self-direct. The youth continued to laugh and work together as they built their towers within their teams until the time was over.







## **Totem Truths**<sup>†</sup>

After youth had been primed to work collaboratively, they were given the task to create a “totem pole” section utilizing different imagery and symbols that represented their strengths, hobbies, and goals. During this activity, youth began to just scratch the surface of what they are good at, what they like to do, and how that relates to their future. To start, youth were given only 30 seconds to collect supplies from the creative table so that they could practice divergent thinking and pick anything they thought they may need without time to second guess themselves. Once youth returned to their seats they began working on identifying imagery that they felt best represented their talents, interests, and goals and by the end they had a finished section of a totem pole.

<sup>†</sup> Refer to appendix page 188 to see research session #1 totem poles



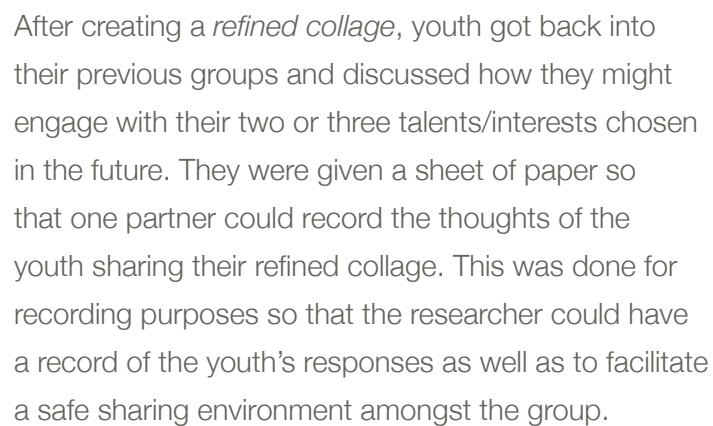
<sup>†</sup> Diverge refers to a process of generating as many ideas as possible while deferring judgment. Refer to appendix page 193 for more information

## Collage<sup>†</sup>

Next, youth began to work on a more in-depth activity where they created a collage based off of their talents and interests and goals. For this activity, they were prompted to think deeper about these aspects of their life and diverge<sup>†</sup> further based off some of the ideas they generated in the previous *totem truths* activity. Once again, youth were given access to the same creative supplies that they had collected for the Totem activity. After completing their collage, youth were asked to discuss their visual with a partner and through the conversation narrow down to two or three most important aspects of their own collage that they would like to move forward with. Within their self-chosen groups, youth were asked to record their partner's responses on a sheet given to them by the researcher, which gave youth area to write the two or three converged<sup>†</sup> collage components as well as the reasoning behind each component chosen.



† Refer to appendix page 188-189 to see research session #1 collages

[illegible]

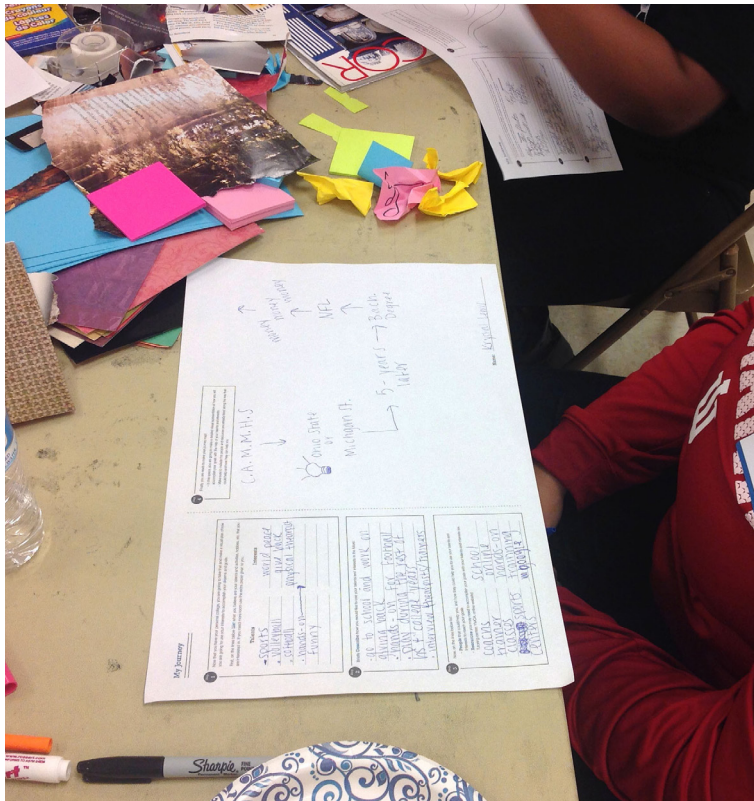
## User Journey Maps<sup>†</sup>

Once youth created collages based on their talents, interests, and goals, they moved on to creating a visual *user journey map* to describe how they would utilize these in the future. First, they started by creating a list of what they believe to be their talents and interests. They were instructed to pull from their collage as well as to think of others if they chose to do so. Then, they wrote a short description of how they will use their talents and interests, that they had come up with previously, in their future to reach their goals. Next, they established another list and this time were asked to write down all of the people and resources that could help them to accomplish what they previously described. People were defined as, those who could help you to use your talents and interests. Resources were defined as, those you may need to accomplish your goals with your talents and interests (ex. Tutoring center, YMCA, online website).



<sup>†</sup> Refer to appendix page 191  
to see research session  
#1 user journey maps

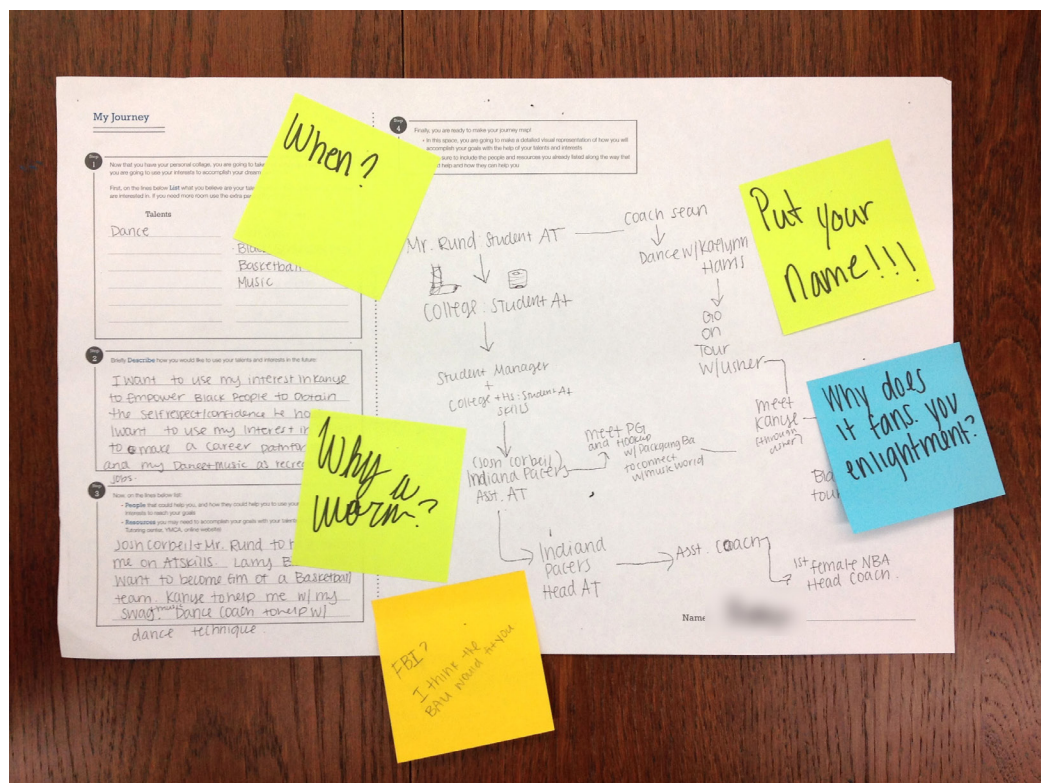




Finally, youth were instructed to create a visual journey map of how they would go about accomplishing their goals with the help of their talents and interests. They pulled from the description that they previously wrote as their main objective and mapped out how they would get from where they are right now in their lives to their intended goal. During this part of the activity, they were encouraged to incorporate the people and resources that they had generated in their map, how they were going to help, and when they would come in during their timeline journey. Youth went through this process to be able to visualize how they are going to reach their goals and the path they should take in order to do that.

## Round Robin

Once youth had finished their journey maps, they then went through a cycle of revising known as “round robin”. Youth rotated three times through their peers’ *user journey maps*. This was done in order to give them feedback and suggestions, and ultimately strengthen their maps with the addition of their own personal knowledge. After youth had finished their three rounds of revising, they were engaged in a short group discussion where the researcher asked whether or not anything was added to their maps that they hadn’t thought of beforehand. Several youth gave examples of people and resource suggestions that they had at their disposal, but were not aware of, and wouldn’t have known about if it were not for this exercise.





*Youth participate in a group reflection at the end of research session #1*

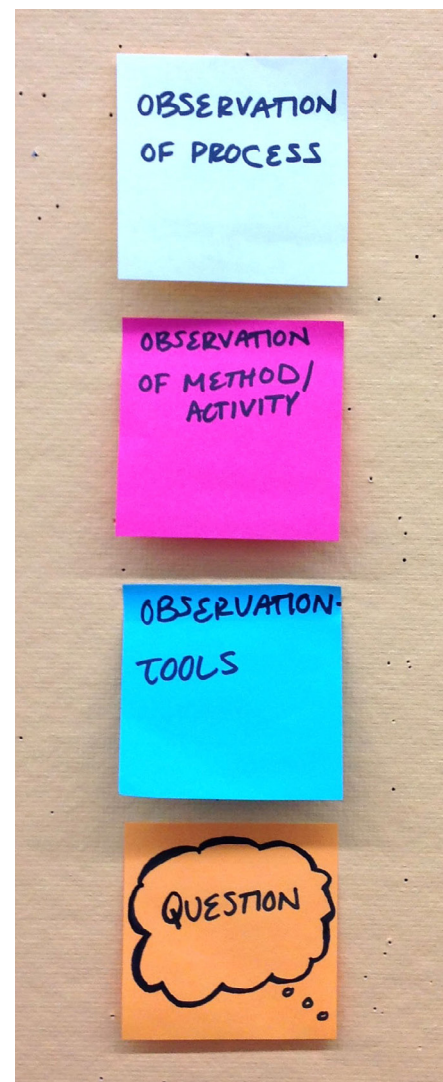
### **Group Reflection**

Throughout the session, youth were asked to take part in a series of activities that were meant to dig deeper and eventually uncover their latent talents and interests so that they could discover a path to self-fulfillment. After going through the scaffolded activities, youth and the researcher took part in a short 10-minute group reflection where they were asked if they learned anything about themselves. Youth mainly benefited from the *round robin* activity where they gained valuable insight into other people and resources that could help them along the way to reaching their goals. As the reflection progressed, youth became more open and explained what they liked, what they didn't like, and what additional tools/methods they believe would have helped them dig deeper into their thoughts and feelings. The following section will discuss analysis of the data gained throughout this first research session and how this informed the second collection session at Crispus Attucks.



## 8.2 >> Analysis #1

To begin the process of analysis, information from the first research session was externalized and organized on a large wall and mapped in sequential order according to the session flow and the methods youth engaged in. Once information was systematically laid out, the researcher used *organizational process mapping* to make observations about the session process, methods/activities, and tools utilized. Questions about the process, methods/activities, and tools were also yielded. These observations were recorded on different colored post-it notes that represented a particular category of observation. Next, these post-its were transferred to another wall and affinity diagrammed to look for patterns and ultimately insights to help inform the research.



Organizational Process Mapping



*Affinity Diagramming*

It was the intent of this research to find a way for at-risk urban youth to uncover their latent talents and interests utilizing co-design, so that they can be guided toward the path to self-fulfillment. In order to do this, youth needed to dig deeply by engaging in a series of creative, collaborative scaffolded activities to uncover their latent talents and interests. Below are the insights gathered from the data categorized into five main groups: Prompting, Methods, Tools, Environment and Process. Throughout this session, all five categories will be discussed. However, for subsequent sessions some may be left out due to no significant insights or changes occurring in the research planning framework.

1. Process- The flow of the session from initial introduction to concluding remarks;  
how activities are being scaffolded and feed in to one another
2. Methods- specific activities which youth are being engaged in throughout the session
3. Tools- Tangible materials and instruments given to youth
4. Prompting- The way in which directions and verbal interactions are being expressed
5. Environment- The surroundings or conditions of the surroundings



## Prompting

Through analyzing the first research session data, it was found that youth were still operating on a superficial<sup>†</sup> level when it came to expressing their talents and interests. This led to the notion that they were not being given the opportunity to dig deeper and express their underlying talents and interests. For example, youth were able to creatively represent topics such as “music” and “sports” on their *totem truths* and collage however, they did not express *why* they were interested or talented at these. It was determined through this information that youth were not being prompted “why?” as much throughout their activities or the group reflection at the end of the session. The session prompting also did not stress the importance of happiness and therefore youth were unable to connect their talents and interests to fulfillment. Prompts that were not utilized included: How happy does this make you? Why does it make you happy? If it doesn’t make you as happy as something else then why have you expressed it on your totem/collage?. These example prompts would have given youth the opportunity to express their underlying values beneath their more superficial talents and interests.

<sup>†</sup> Superficial meaning lacking in depth or solidity; implies a concern only with surface aspects or obvious features

## Methods

During the first research session, youth were mainly sitting down and not moving about the space. However, during the *build-a-tower* activity, they were working in a highly collaborative, fast paced, and active manner, which they enjoyed by working together, smiling, and laughing. This activity's purpose was to gain buy-in from the youth into the collaborative problem solving process, which was achieved by engaging them in an activity where they could work together in unison while having fun.

When it came to the specific activities youth were being engaged in throughout the process, youth stated that they felt that they needed more variation to benefit from the process. Through analysis, it was

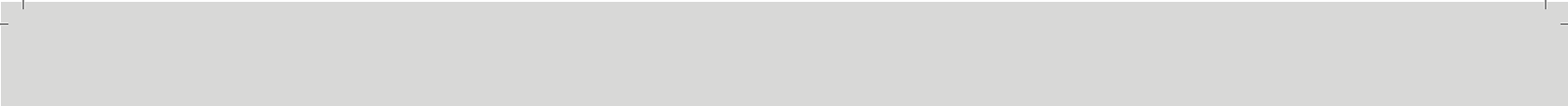
discovered that youth were being asked to repeat the same activity from

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*I feel like I'm being asked to do the same thing over and over again.* >> Youth participant

*totem truths*, *collage*, and the *refined collage* activities.

These activities had very little variation among them and were prompted in the same manner to “dig deeper into your talents and interests.” This lack of distinction and direct prompting did not give youth enough structure to know how to dig deeper and therefore this resulted in the superficiality of their talents and interests that they expressed within the session. Direction within activities proved to be problematic as well during the first collage, where youth were asked to converge on the most “important aspects” to move forward with for their refined collage.



Youth were not provided any systematic way to know how to converge on the multitude of talents and interests that they visually expressed on their initial collage. This led to confusion of the distinction between the two collages.

During the *round robin* activity, it was the intent for youth to gain the knowledge of their peers in order to strengthen their *user journey maps* by collective input. This was accomplished by youth rotating throughout the maps and adding their suggestions to each. Youth expressed during the group reflection at the end that they enjoyed this activity because they learned very useful things, such as upcoming college fairs for example, that would be able to help them in their future. Therefore, by youth gaining the collective input from their peers, this helped them in strengthening their *user journey maps* by adding additional people and resources that they might not have thought of on their own. These people and resources can be utilized by youth to help them to fulfill their goals.

At the beginning of the research session, youth were introduced to a list of four “Best Team Practices”.

- *Support others: Be open, Encourage*
- *Provide positive feedback*
- *Active listening: talk one at a time*
- *Speak clearly and explain what you mean*

These practices were briefly introduced to youth with the intent that they would keep these in mind when working through the session. However, on many occasions youth exhibited talking over one another, being closed off and not wanting to express themselves, and providing non-useful feedback such as “why do you want to be JUST a mom?” The introduction of these practices were not effective as the youth did not actively engage with them, or exhibit them, throughout the process. Through analysis, it was found that youth must be reminded of these practices throughout the session instead of assuming that they will practice them. A systematic structure needed to be put in place in order to show youth how to engage with these practices, and when they have the opportunity to do so in specific activities.

## Tools

During the group reflection at the end of the session, youth indicated that they did not feel like there was much variation in the activities or the tools that they were utilizing.

They suggested that it would be fun to work with more three-dimensional (3D)

supplies such as Legos and playdough. They also stated that they enjoy building and working with

their hands to create and that this helps them feel more creative. Also, letting them choose what imagery, through the use of magazines and not packets of pre-selected photographs, gave youth their own voice and freedom to express themselves, rather than someone assuming what photos and imagery that may want. Giving youth the power to choose can be a way to increase their

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*I love playing with playdough and Legos  
because it just makes me feel more creative!*

>> Youth participant

Many of the tools utilized lacked variation in direction and format as previously described. The use of the same supplies over and over again did not enhance youth's creativity, as their totems looked similar to their collages which looked similar to their refined collages. The lack of variety within these activity tools indicated that youth were not being given the opportunity to engage more creatively with the supplies given. Youth stated in the group discussion that they did not feel that the magazines supplied were relatable to them. They were given: *Time*, *National Geographic*, *Simple Living*, as well as other magazines that utilized a lot of imagery. These magazines were not relatable to youth because they did not pertain content related to youth ethnic, urban, or generational culture.

## Environment

Throughout each activity, upbeat music was played in order to keep the youth more engaged and feeling creative as many of them indicated in the journaling exercise, prior to this phase of research, that music makes them feel creative. Although the music was played during times when youth were asked to be generative, youth did not exhibit singing, dancing, or other behaviors that would indicate the music was making them feel more creative. Youth were also confined to one table in the middle of the room; Aside from the *build-a-tower* activity youth were sitting at the table as a group. This lack of movement gave the space a more lethargic feeling rather than a creative and ambitious sensation. self-efficacy<sup>†</sup> and therefore motivate them to want to engage more deeply with the activities and eventual outcome of the *user journey map*.

<sup>†</sup> Self-efficacy is one's belief in one's ability to succeed in specific situations

## Process

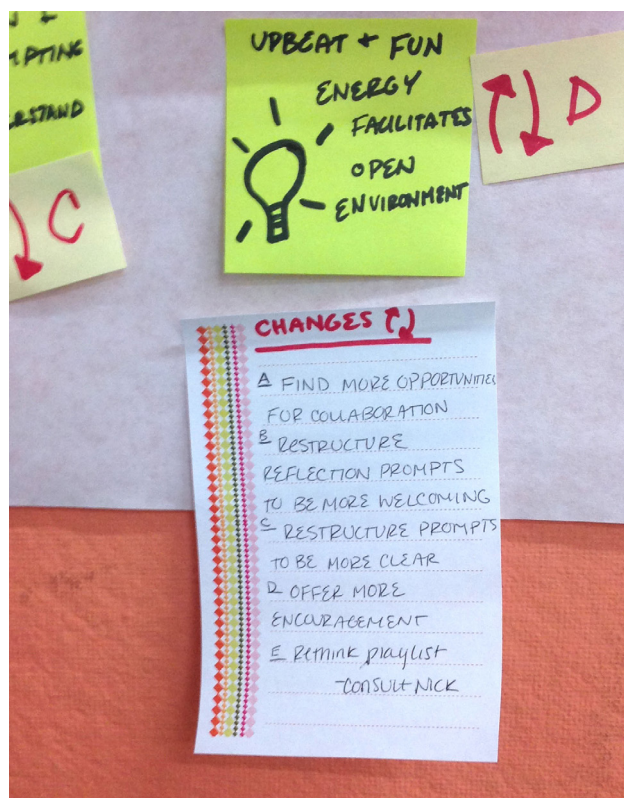
Youth were led through a series of scaffolded activities in order to uncover their latent talents and interests utilizing co-design. While analyzing the process and flow of the first research session, it was found that the listing portion of the *user journey map* activity, where youth listed their talents and interests, came far too late in the process to be useful for youth. In the previous activities such as *totem truths*, *collage*, and *refined collage*, youth were being asked to reflect on their talents and interests and visually and creatively represent them on the tools given. However, youth did not have anything to pull these talents and interests from, and therefore struggled to represent these. This resulted in the lack of substance in each activity tool, and hindered the process of reaching and communicating their underlying values.

Overall, youth successfully were able to systematically plan out, through *user journey mapping*, how they can get from point A to point B in their lives utilizing their talents and interests to reach their ultimate goals. They did not dig deeper into their underlying values or goals, but were still able to start to express how the goals they planned out could make them happy in the future. The next session would take into account all of the major findings from the first research session and be reshaped in order to foster more of the youth's inherent creativity, as well as circumvent the superficial nature of participants responses.

### 8.3 >> Synthesis #1

After analysis was complete and insights were documented based on patterns observed in the research, changes that needed to occur from the first research session to the second were made. These necessary changes were documented in order to synthesize and strengthen the next research session with the youth, and ultimately the intended solution to the research question.

The changes that were documented on the affinity diagram were gathered together and categorized by a color-coding system into five main categories; changes needing to occur in the session process, methods/ activities, tools, prompting, and environment.





Once these were color-coded they were then used to synthesize a new research planning framework for the second research session at Crispus Attucks High School.

<sup>†</sup> Refer to the appendix page 192 for a synthesized research planning framework for the research

Below are the changes made in the research process and session that were informed by the insights gained. These are categorized into five main groups: 1. Prompting, 2. Methods, 3. Tools, 4. Environment and 5. Process.





## *Prompting*

Prompting was highly repositioned throughout the research session, and was indicated as such in the facilitator script, to emphasize happiness as a way to assess personal talents and interests. According to Gewirth's definition of self-fulfillment, youth must find out what they are truly interested in and good at in order to be put on the path to reaching their ultimate happiness. Therefore, this link was made between happiness and youth's talents and interests by utilizing prompts such as "How happy does this make you? Why does it make you happy? If it doesn't make you as happy as something else then why have you expressed it on your totem/collage?" These example prompts will give youth in the next research session the opportunity to express their underlying values beneath their more superficial talents and interests.

Due to the superficial nature of the youth's responses within the activities, it was found in analysis that they were in fact not being given the opportunity to dig deeper to find their underlying values within their talents and interests. Therefore, in the next research session, why prompting needed to be highly stressed. According to Marc Stickdorn, author of "This is Service Design Thinking" and creator of the Five Why's method, asking a chain of questions can be used in order to dig below the outward symptoms of something in order to uncover the motivations that are at its root cause (Stickdorn, 2011). This type of prompting can be used in order to enable youth to explore a concept in greater depth. to explore specific goals they have for their future.

In addition, Liz Sanders explores the benefit of sharing experiences and states that by doing so, this helps participants to access underlying needs and values, which serve as the basis for exploring their aspirations for future experience (Sanders, 2012). Therefore, by utilizing why prompting in order enable youth to uncover their underlying values of their talents and interests, this will help prime them to explore specific goals they have for their future.

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### *Sharing experiences helps participants to access underlying needs and values*

>> Liz Sanders

For example, when youth express they like sports they would then be prompted to explain *why* they enjoy sports or *why* they feel they are interested in sports. Prompting in such a way gives youth the opportunity to dig deeper on their own and enables them to verbalize it in an open manner such as in the group discussion or individual conversations. This could later lead to youth generating a specific goal, such as becoming a professional athlete, during their journey mapping where they will make a plan of how to accomplish this goal.

## Prompting

When analyzing the data from the first research session, it was noted that there was a lack of variation amongst the activities that youth were engaging in. Therefore, when synthesizing a new planning framework for the second research session, this was taken into account when restructuring some of the activities. For instance, the *totem truths* activity prompted students to visually represent their talents and interests utilizing the creative supplies<sup>†</sup> given to them. This was replaced with the simple *free-listing* activity, which previously resided within the user journey map activity, where youth free-listed their talents and interests. This activity was moved in order to create a better flow within the session as well as give the youth the opportunity to pull from a list of talents and interests for their collages. Youth expressed discomfort with having to be creative and visual about such abstract concepts from the start of the session. This illustrates the fact that appropriate scaffolding of creative and generative activities is very important especially while working with participants, such as at-risk urban youth, who are not used to such tasks. Liz Sanders states that one responsibility of a designer is to provide scaffolds that support and serve peoples' needs for creative expression at the making level (Sanders, 2012). Therefore, participants cannot be expected to become instantly creative. They need time for immersion into the creative process in order to be able to engage with generative tools and activities. Therefore, this activity was adjusted to accommodate for the issues found in analysis.

<sup>†</sup> Creative supplies include:

- Magazines
- Construction paper
- Patterned paper
- Markers
- Colored pencils
- Stickers
- Glue
- Tape

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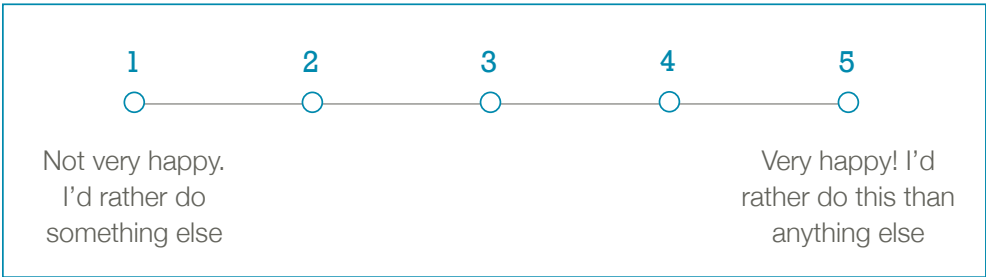
*I'm just not used to talking about  
my goals or myself*

>> Youth participant

Another activity that was introduced in order to give the youth variation, as well as refocus their talents and interests in terms of happiness, was the *semantic differential*. This was used in order to give youth a systematic way to converge on their talents and interests for the refined collage, based on how happy engaging with each talent and interest makes them. By scaffolding the activities to feed directly into one another, this gives youth a way to move smoothly from one activity to another. For example, once youth have listed their talents and interests they transfer the mover to the semantic differential sheet so as to immediately start assessing how happy each of these makes them. Organizing the activities in this way gives youth a way to move from simply identifying their talents and interests to starting to discover the deep values associated with these by how happy each talent and interest makes them.

After transferring the talents and interests to the semantic differential, youth then rated their happiness level on a likert scale of 1-5 (*refer to figure 8.2*). By weighing each talent and interest on the scale, this gave youth a way to see these through the lens of their personal happiness and encourage them to converge, for their refined collage, on those that they believe will positively impact their future goals.

fig 8.2 Semantic differential “happiness scale”



At the beginning of the research session, youth were introduced to a list of four “Best Team Practices” as described previously. These practices were adapted from those that Basadur explains in his book “Simplex: A Flight to Creativity”. By actively engaging and demonstrating these practices, this helps to use the three process skills as defined by Basadur<sup>†</sup> (Basadur, 1994). The use of these practices proved to be ineffective, as the youth did not actively demonstrate the use of these throughout the session. Therefore, the engagement with these practices was reshaped in order to account for the overlooked benefits of collaborating in a team environment. At pre-planned times throughout the session, one youth would be given a “landmark card”<sup>‡</sup>, which states the specific practice all youth should be exhibiting in the activity and specific behaviors to watch for. For example, during the *round robin* activity a youth would be given a card titled “Providing Positive Feedback” (*refer to figure 8.3*). This card would have specific behaviors for that youth to watch for during the *round robin* activity such as:

- *Be specific- provide examples*
- *Avoid “impossible” feedback*
- *Keep other’s goals in mind- not your own*
- *Don’t try to change goals*

<sup>†</sup> Refer to appendix page 193 for more information on these process skills

<sup>‡</sup> A landmark card is a card that youth use to assess whether or not they and their peers are demonstrating the best team practices

fig 8.3 'Providing Positive Feedback' landmark card

Teamwork Practice: Provide positive feedback

Did you see?

Be specific- provide examples	Avoid "impossible" feedback	Kepp other's goals in mind- not yours	Don't try to change goals

The youth would be instructed to watch others in the cohort and at the end of the activity, fill out the card and put an “X” on the behaviors that they felt were exhibited and leave the one’s that were not, blank. Then, the youth would be asked to go up to the *master landmark sheet*, hung up in the space for everyone to see, and place a sticker on the boxes of the practices that they felt were exhibited. This activity utilized tools such as a card and a master sheet, so that the youth could fill out the card at their seat throughout the activity.

Giving youth the power to choose how they are engaging with tools and activities can give them the sense that their voice is truly being heard and therefore increase their self-efficacy.

A case study done by Reed Larson, Kathrin Walker, and Nickki Pearce<sup>†</sup> on four youth-driven programs, found that youth experienced a high degree of ownership and empowerment through self-driven activities. Freire (1970) warned that “when teachers are positioned as authorities, student’s ownership, creativity, and authentic learning is undermined.” Therefore, by sharing power amongst youth and between youth and the facilitator, this creates a platform for higher ownership of the process and creativity throughout. When this is not done however, and power is not shared between the facilitator and the participants, this can inhibit youth-adult interactions because youth will defer to adults’ authority (Larson, 2005). Within the second research session, to be covered in the next chapter, youth indicated that they usually just tell adults what they want to hear when asked about their future goals. One female youth stated “I feel like people won’t take me seriously when I say I just want to be a mom when I grow up. So I just tell them that I want to go college.”

<sup>†</sup> Researchers in the field of youth-driven programs

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*I feel like people won’t take me seriously when I say I just want to be a mom when I grow up. So I just tell them that I want to go college.*

>> Youth participant

By fostering youth’s ownership over the process this can make them more successful within the session. A teacher who took part in Larson, Walker, and Pearce’s research stated, “A big part to the success is that it’s theirs, they feel the ownership” (Larson, 2005). By youth feeling empowered throughout the process, this can open the door to youth feeling more competent and motivated to strive toward the goals of the session.

Breaking down the landmark activity to result in periodic checkpoints of whether or not youth are actively demonstrating these best team practices gives them the expectation to be practicing them throughout the process, which can also result in a more collaborative teamwork environment.

## Tools

During the group reflection, youth indicated that they wanted to work more with three-dimensional supplies because this helped them to feel more creative while working. In the next research session, the *user journey map* activity was restructured to include an additional option of utilizing building blocks and playdough to create a “3D journey map”. Youth were given the option to utilize these supplies in whatever way they saw fit such as creating small figurines to represent people or places or just play with the supplies while working. This is another example of how power was distributed to the youth by giving them a multitude of options to work with and little constraints.

Youth also did not feel like the magazines that were provided were relatable to their age, race, or culture. This was made even more apparent by their use of the magazines throughout the *totem truths*, *collage*, and *refined collage* activities. The youth utilized imagery, from the magazines provided, in these activities but it was very difficult for them to find the imagery that they were searching for exactly. When asked which specific magazines they would like to have if repeating this session, they gave examples of: *Sports Illustrated*, *Ebony*, and *People*.



The youth females, all age 16-17, stated that these magazines would give them something more closely to relate to. Therefore, in the second research session, the introduction of more relatable magazines was made to the research planning framework.

## Environment

Youth were confined mostly to one table in the middle of the room throughout the session. In the second research session, to alleviate the unenthusiastic mood that the immobility within the space created, youth will move to another table during their *user journey mapping* in order to take them to another creative space. This table will already be set up with building blocks and playdough and will be used for this journey

mapping, *round robin*, and the group discussion. Liz Sanders states that,

“Creativity is fostered by having a choice of spaces in which to explore” (Sanders, 2012). She goes on to describe that how a space is set up can help to foster creativity and innovation within the engagement with participants. Some general principles behind these spaces and places are:

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*Creativity is fostered by having a choice of spaces in which to explore* >> Liz Sanders

- *Have furniture that can be easily rearranged*
- *Have walls where material (especially visual material) can be posted for all to see and to act upon*
- *Accommodate a wide variety of behaviors such as quiet reflection, relaxation, active collaboration, and mess making*
- *Provide both for individuals and for groups of varying size in working face-to-face*
- *Provide for many moods including playful, stimulating, and informal as well as formal*
- *Be open to people both inside and outside of the organization*

It is the intent that by giving youth freedom within the space, this will boost their ownership and energy and lessen their unenthusiastic mood during the session. Furthermore, by creating an open and welcoming space, this will foster youth's creativity and motivation to succeed.

### **Process**

A main obstacle in the first research session found throughout analysis, was that youth were not digging deeper to expose the underlying values of their talents and interests. A cause of this obstacle was the placement of the *free-listing* activity which came in at the beginning of the *user journey mapping*. For this next research session, the listing activity will be repositioned and put in place of the *totem truths* activity. This will be able to create a better flow to the session by giving youth an opportunity to diverge on their talents and interests in the beginning and then have the lists to pull from when creatively expressing their talents and interests through the *collage*, *refined collage*, and *user journey map*. By making this change, the hope is that youth will be able to expose their underlying values of their talents and interests by exploring why they are interested and talented at certain activities.

## 8.4 >> Outcomes #1

This research session was successful in many ways and gave much insight into the process, methods, tools, prompting, and environment at-risk urban youth were working with in order to uncover their latent talents and interests utilizing co-design. While youth were able to successfully plan out how they can utilize their talents and interests in order to reach their goals, they were not as focused on happiness throughout the session. This was due to a lack of appropriate prompting, tools, and methods.

After synthesizing the new research planning framework and process for the second research session, it was found that an additional step to analysis and synthesis must take place to ascertain whether or not the process was working and at what moments it was working. This included mapping out “pivotal moments”<sup>+</sup> within the research while analyzing and then synthesizing those on a sequential graph. Utilizing this method in the second and third research session will give insight into the effectiveness of the process to uncover talents and interests in at-risk urban youth.

### *Answering research sub-questions*

While many of the research sub-questions were still unanswered after the first session, the first sub-question could be answered:

#### *Sub-question #1*

*How might the appropriate, iterative, and collaborative activities be identified, selected, and adapted for at-risk urban youth to experience initial success?*



This was done by first diverging on creative and generative activities that could help youth accomplish the uncovering of their talents and interests. Next, these activities were refined to include collaboration amongst the youth such as in the *round robin* activity where youth work together to refine each other's *user journey maps* in order to strengthen them. This activity as well as the collage activity were positioned as iterative activities that could show youth the benefit of an iterative process by continuous refinement. By testing these activities and process out with at-risk urban youth in a session setting and then analyzing the outcomes, this gave insight into whether or not the activities were appropriate for the youth to experience the feeling of initial success and from there could be refined.

The next research session also took place at Crispus Attucks Medical Magnet School in Indianapolis with a different set of youth who could offer a new perspective on the newly synthesized process and help to answer the remaining research sub-questions.

<sup>†</sup> Pivotal moments are times when youth were successfully able to communicate a deep thought or feeling or accomplish an activity objective

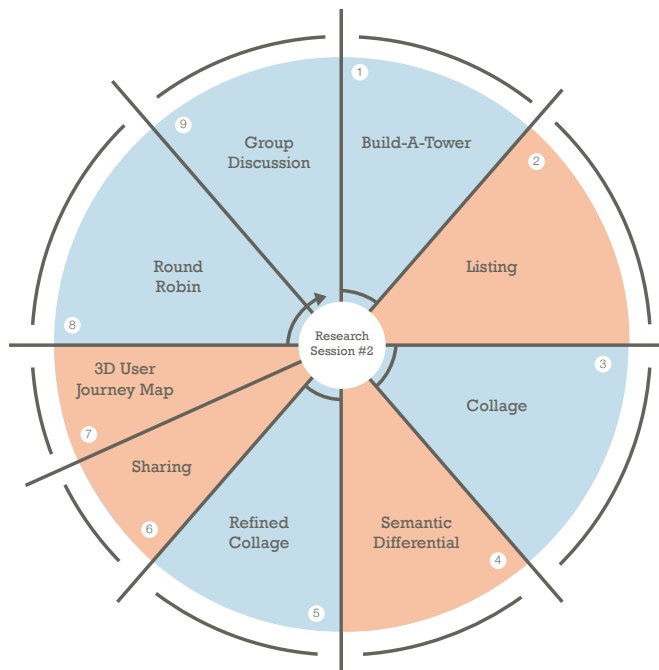
## { 9 } Research Session #2

### 9.1 >> Session #2

After the first research session, a second after-school session was held at Crispus Attucks Medical Magnet School in Indianapolis, IN, with two youth 16-year old female students. Upon the arrival of the youth, a brief schedule and a quick overview of “Best Team Practices” was presented to them. These practices were only briefly discussed so that the participants understood that they would be asked at various times to engage with the *landmark exercises*, where they would be assessing their ability to achieve these best practices.

After an initial introduction, youth were led through a series of scaffolded activities intended to uncover their latent talents and interests by utilizing their collaborative efforts and creativity. The previous research session was analyzed and the insights gained helped to synthesize a new research session framework, which was implemented into this session. *Refer to figure 9.1* for a visual of the process which illustrates the activities that changed or were added within the second research session. The following sections provide an overview of these new or adapted activities within the second research session with at-risk urban youth at Crispus Attucks.

fig 9.1 Research Session #2 process with new activities



## Introduction

Youth were welcomed into the same large home-economics room as the first session where they were first offered pizza and snacks before the session began. They then sat at one of the large tables in the middle of the room while the purpose and the schedule of the session were described. Youth were then introduced to the “Best Team Practices” and reminded that they would be prompted to practice these at various times throughout the session. The following provides an overview of the new or adapted activities youth participated in and tools they utilized.

## Introduction

After youth competed against one another in the *build-a-tower* activity, they moved on to listing their talents and interests in the *free-listing* activity. Youth were given definitions of “talent” and “interest” on their listing tool and were read these aloud prior to starting the activity. As youth diverged on their talents and interests, they were prompted to dig deeper by thinking about why they are interested in something or why they are talented at something. This was done in order to start to connect their talents and interests to their underlying values and diverge further on different facets of their talents and interests. For example, one youth listed “writing” under her talents and when prompted further to list other talents relating to writing she wrote “spoken word” and “poetry” right after, indicating different and specific ways of applying her writing skills.

**Happiness Scale**

For this exercise, you are going to Rank each talent and interest on a 1-5 happiness scale in order to assess how happy each of your talents and interests make you.

\*Happiness\* is defined as a feeling you get from doing something for yourself or for others that you enjoy.

1 2 3 4 5  
Not very happy to do something else Very happy to do something else

**Step 1** List each talent/interest/goal from your collage:

- Speaking
- Religion
- Money
- Social Media
- Eating
- Basketball
- Bathing
- Smiling
- Science

**Step 2** Rank each talent/interest/goal on the happiness scale:

Talent/Interest	1	2	3	4	5
Speaking					
Religion					
Money					
Social Media					
Eating					
Basketball					
Bathing					
Smiling					
Science					

**Step 3** Narrow your list of talents and interests down to 2 or 3 to focus on.

You can choose these by looking at your happiness scale and choose the ones that make you really happy or you may choose something that doesn't currently make you that happy.

- 1 Money
- 2 I enjoy expensive items
- 3 Eating
- 4 I enjoy eating different foods
- 5 Science
- 6 I enjoy learning about science

**Happiness Scale**

For this exercise, you are going to Rank each talent and interest on a 1-5 happiness scale in order to assess how happy each of your talents and interests make you.

\*Happiness\* is defined as a feeling you get from doing something for yourself or for others that you enjoy.

1 2 3 4 5  
Not very happy to do something else Very happy to do something else

**Step 1** List each talent/interest/goal from your collage:

- Swimming
- Marriage
- Family
- Money
- Horses
- Traveling

**Step 2** Rank each talent/interest/goal on the happiness scale:

Talent/Interest	1	2	3	4	5
Swimming					
Marriage					
Family					
Money					
Horses					
Traveling					

**Step 3** Narrow your list of talents and interests down to 2 or 3 to focus on.

You can choose these by looking at your happiness scale and choose the ones that make you really happy or you may choose something that doesn't currently make you that happy.

- 1 Swimming
- 2 I like being in the water
- 3 Marriage
- 4 Love forever love
- 5 Money
- 6 I need it for a good life



**Happiness Scale**

For this exercise, you are going to **Rank** each talent and interest on a 1-5 happiness scale in order to assess how happy each of your talents and interests make you.

"Happiness" is defined as a feeling you get from doing something for yourself or for others that you enjoy.

1 2 3 4 5  
0 ——— 0 ——— 0 ——— 0 ——— 0  
Not very happy to do something else Very happy to do anything else

**Step 1** List each talent/interest/goal from your collage:

Swimming  
Marriage  
Family  
Money  
Horses  
Traveling

**Step 2** Rank each talent/interest/goal on the happiness scale

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

**Step 3** Narrow your list of talents and interests down to 2 or 3 to focus on

You can choose these by looking at your happiness scale and choose the ones that make you really happy or you may choose something that doesn't currently make you that happy

- Swimming I like being in the water
- Marriage I have forever love
- Money I need it for a good life

**Happiness Scale**

For this exercise, you are going to **Rank** each talent and interest on a 1-5 happiness scale in order to assess how happy each of your talents and interests make you.

"Happiness" is defined as a feeling you get from doing something for yourself or for others that you enjoy.

1 2 3 4 5  
0 ——— 0 ——— 0 ——— 0 ——— 0  
Not very happy to do something else Very happy to do anything else

**Step 1** List each talent/interest/goal from your collage:

Speaking  
Religion  
Money  
Social Media  
Eating  
Basketball  
Bathing  
Smiling  
Science

**Step 2** Rank each talent/interest/goal on the happiness scale

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

**Step 3** Narrow your list of talents and interests down to 2 or 3 to focus on

You can choose these by looking at your happiness scale and choose the ones that make you really happy or you may choose something that doesn't currently make you that happy

- Money I enjoy expensive items
- Eating I enjoy tasting different foods
- Science I enjoy learning about science

## Semantic Differential

After youth went through the *free-listing* activity they then translated the words on their lists into visual form on their collage sheet by utilizing the creative supplies provided. Then, youth wrote the talents and interests that they visualized on their collage onto their semantic differential sheets and rated them on a likert scale of 1-5 in terms of how happy each made them. They then used this sheet to converge on three talents/interests and gave their explanation of *why* they chose each. This was in order to explore their three talents and interests more deeply rather than many at a surface level. The convergence also indicated which talents and interests youth saw as influencing their future goals. For example, in some cases youth may have converged on these talents and interests because those three each were rated a five and in other cases it could have been because they thought they would highly engage with these in the future, such as a talent they may need for a specific career path.



## Sharing

Once youth converged on three talents and interests, they were instructed to create a refined collage based on these. These refined collages gave youth the opportunity to dig deeper on a few significant talents and interests and visualize these. This was done rather youth trying to visualize a large amount of talents and interests that may not be very significant to their lives and future. Once these refined collages were complete, youth were prompted to share with each other what was on their collages and why they narrowed down to the three that they chose. During this sharing activity, youth stated their confusion of what exactly to share about. They were given three minutes each to share with each other however, the sharing in total took no more than two minutes. Youth expressed in the group reflection at the end of the session, that they are not used to opening up and talking about their talents, interests, and future goals with one another. This clarified the reasoning behind the confusion and awkwardness that took place during the sharing activity.



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*What do you mean 'share'? What do you want us to talk about?*

>> Youth participant

### 3D User Journey Map

Once youth shared their collages with each other, they moved on to journey mapping them. Contrary to the first research session, instead of listing their talents and interests first, youth described how they envisioned using their talents and interests in the future. Then, they went through an activity where they diverged on people and resources that could help them along the way to reach their intended goal. “People” and “resources” were defined for the youth on the user journey map tool. They were also given two examples of each so that they could fully understand how a person and a resource might help them to accomplish their intended goals. In this section of the activity, youth each wrote down four to seven people/resources and did not express any confusion or difficulty in doing so.









### *Group Discussion*

Once youth had mapped out their journey to reach their goals, they took part in an informal group discussion where they were asked different questions about the session. Here, youth described activities they liked, didn't like, and how they would improve the session. During this time, one female youth expressed her desire to become a mom as her career, which she felt was not respected by the other youth who happened to be one of her friends. This youth began to open up as to why she wanted to become a mother whilst the other youth chuckled under her breath. This led her to express that she felt uncomfortable stating her goals because she didn't feel like people would take them seriously, and as a result, would usually state goals such as "go to college" in order to appease others. This interaction with youth informed further revisions to the prompting of which was adjusted to encourage more storytelling about the youth's personal happiness and more *why* prompting as well. This will be covered more in depth during synthesis.

Throughout the group discussion, both youth were further prompted through a series of "why" questions so that they could reach the root reasoning behind their intended future specific goals. This led to rich storytelling by both youth which will be further discussed in outcomes.

## *Parking Lot*

During this research session, youth also engaged with the Parking Lot as a way of immediate reflection within the activities. At various times throughout the session, youth responded to prompting questions<sup>+</sup> by writing their answers on post-its. Youth wrote down a word or two for each question and stuck their post-its up on the parking lot tool so that their answers could be used for the group discussion at the end of the session. This tool was utilized in order to capture youth's thoughts in the moment rather than asking them to recall important moments at the end of the session. Donald Schön, an influential thinker in developing theory and practice of reflective professional learning, calls this phenomenon "reflection-in-action." He states that as a person is reflecting on something at-hand, he or she also reflects on the understandings that have been implicit in the action, understandings which surface, criticizes, restructures, and embodies in further action (Schön, 1987). Therefore, as youth reflect during a specified activity, or "in-action", they are able to further understand some of the decisions they made such as "why are you interested in money?" Helping them to reflect immediately after expressing such a talent or interest can help them to dig deeper and uncover their underlying values.

<sup>+</sup> Refer to appendix page 194 for a list of parking lot prompts utilized throughout the session.

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*I want money to help provide  
for my family* >> Youth participant

## Landmarks

Throughout the session, youth were given a role to assess whether or not they and their peers were demonstrating a use of Best Team Practices. In order to give ownership of this process to the youth, they were assessing themselves and each other rather than being assessed by a facilitator. However, during the first landmark activity, “active listening”, one of the youth expressed that she was unhappy that her peer got to “speak for her” and instead, she wanted to make sure her opinion was heard as well. The plan was then adjusted on the spot for both youth to have the chance to assess one another during each landmark activity and put a different colored sticker up on the master landmark sheet, to denote which practices they felt were exhibited.

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*Why does SHE get to speak for me?!  
That's not fair.*

>> Youth participant

Throughout the landmark activities, the youth expressed differing opinions on several components of each landmark. For example, one youth believed that they both exhibited “making eye contact” during active listening, while the other youth did not believe either of them were doing a good job at that. This disparity of the youth’s opinions led to a rich dialogue in the group discussion where youth explained why or why not they felt they and their peer were exhibiting components of the best teamwork practices. They also gave valuable insight during this time into how to better practice these for themselves and for others.

## 9.2 >> Analysis #2

It was the intent of this research to find a way for at-risk urban youth to uncover their latent talents and interests utilizing co-design. In order to do this, youth needed to dig deeply to uncover their hidden talents and interest through a series of scaffolded activities as they did in the first research session. After insights had been gained through analysis, an additional step to analysis was made to document pivotal moments within the research.

As performed in the first research session, below are the insights gathered from the data categorized into five main groups: *Prompting*, *Methods*, *Tools*, *Environment* and *Process*. session with at-risk urban youth at Crispus Attucks.



## Organizational Process Mapping





Affinity Diagramming

## Prompting

Through analyzing the second research session data, it was found that youth were beginning to reach beyond the superficial level when it came to expressing their talents and interests. Therefore, in this session, they were being given the opportunity to dig deeper and express their underlying talents and interests. Many of the changes made in the prompting of the session were able to successfully facilitate this opportunity through the continuous prompting of “why” questions. During each activity, youth were prompted to articulate why they were interested or talented at something.

For example, one of the female youth stated that she was interested in having money. This was an interest that she carried throughout listing, collaging, and her refined collage. When asked why she was interested in money she stated that she could use money to provide for her current and future family. Prompting the youth in such a way made it possible for her to dig deeper and reveal the underlying values of her relatively superficial interests and talents. Furthermore, this type of prompting gave youth the opportunity to tie their specific goals back to the reason why they have chosen a specific goal and ultimately youth were able to link their goals to internal happiness and fulfillment. This will be discussed in more detail in the Outcomes section.

Another modification to prompting came at the beginning of the second research session where youth began to ask the session facilitator personal questions such as: “where are you from?” “how old are you?” “why are you doing this research?” There was no pre-planned time for questions of this nature to be asked, however the decision was made to allow youth time to ask questions. This was done in order to establish trust between the youth and the facilitator and to further gain their buy-in to the creative, collaborative co-design process. By allowing them to ask the facilitator personal questions, it helped the youth to open up themselves throughout the research session.

## Methods

During the first research session, youth felt that they did not have as much variation in the activities and supplies that they were engaging with. In order to circumvent this in the second research session, the *semantic differential* was brought in after the first collage activity in order to give more variation in the activities. This tool's purpose was also to compare youth's talents and interests with how happy each made them. The focus on happiness and fulfillment were deficient in the first session and therefore the semantic differential was brought as a way to resolve this in the second session. The semantic differential served as a way for youth to connect their talents and interests with their desire to be happy or fulfilled in life.

The convergence step in this activity also gave youth a way to really reflect on *why* something makes them happy and *why* they see it as part of their future goals. This is where youth began to further tie their interests and talents to their underlying values, their internal happiness, and generalized goals for the future. For example, both youth converged on "money" as a something they would like to focus on in their refined collage. One youth stated her reasoning for this as "I enjoy expensive things" and the other stated "I need it for a good life". Both youth communicated different reasonings, but through analysis of the data it was acknowledged that both expressed joy or happiness that they desired, as well as tying a future general goal to their talent or interest.

During the *3D user journey map* activity, youth worked with supplies such as playdough and building blocks in order to facilitate their creativity whilst making plans for their future. This activity helped youth to systematically map out how they were going to get from where they are right now in their lives, to accomplishing their future goals, all the while leaning on people and resources for support. However, youth desired to accomplish goals such as “become a mom” and “become a biochemist” with very few steps in between their current state and their desired state. While analyzing the data from the *user journey map* activity, this insight suggested that youth are in fact making goals that will fulfill them however, they are not making actionable<sup>†</sup> goals. In order for youth to leave the research session with a plan that they can enact, they must break each large goal down into many more specific goals. This also led to a shift in this project’s overarching researchable question, which will be covered in the later Discussion/Results section.

<sup>†</sup> Actionable goals are those that are phrased in the positive and with a verb as to denote an actual action that needs to take place

## Tools

During the group reflection at the end of the session, youth indicated that they enjoyed working with the 3D supplies and that these helped them feel more creative. Youth successfully sculpted people, figures, and way finding (such as arrows) utilizing the playdough, and used the building blocks for a multitude of reasons such as wanting to express themselves three dimensionally and the enjoyment they gained through playing with these materials. Allowing youth to choose to work with either the creative supplies or just drawing gave them ownership over their creative process and helped youth to feel more like the activities were catered to them specifically.

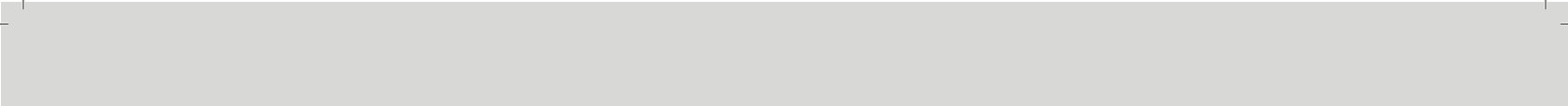
While youth enjoyed the creative supplies, they still did not feel like the magazines given to them during the collage activities were relatable to them. In addition to the magazines from the first session, youth were given *People* magazine and *Sports Illustrated*. However, they felt that even though these more closely aligned with their interests they still were for an older demographic, and they expressed that they would like magazines that related more to their race, culture and age such as *Seventeen* magazine.

### **Environment**

Similar to the first research session, upbeat music was played during each activity in order to keep the youth more engaged and feeling creative. Although the music was selected to appeal more to their age and demographic, youth still did not engage with singing, dancing, or other behaviors that would indicate the music was making them feel more creative or happy.

Youth also were confined in large part to two tables in the middle of the room. Although, during this session, the mood in the room tended to be more upbeat when youth were asked to get up and put stickers on the master landmark sheet or when they switched tables for the *user journey mapping*. Although youth had a more lively demeanor than the first session, they still operated at a relatively low energy level throughout the session.

The convergence step in this activity also gave youth a way to really reflect on *why* something makes them happy and *why* they see it as part of their future goals.

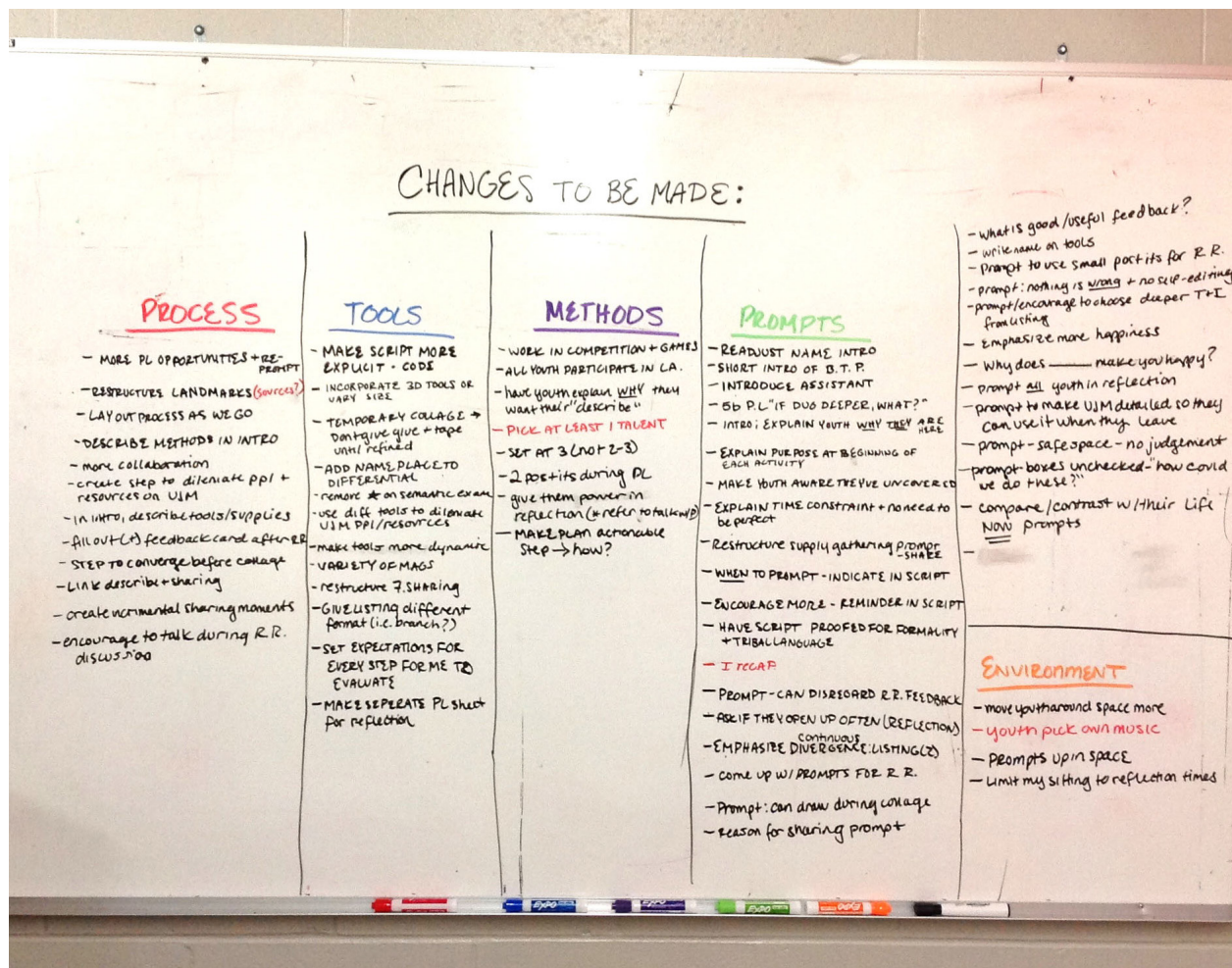


This is where youth began to further tie their interests and talents to their underlying values, their internal happiness, and generalized goals for the future. For example, both youth converged on “money” as a something they would like to focus on in their refined collage. One youth stated her reasoning for this as “I enjoy expensive things” and the other stated “I need it for a good life”. Both youth communicated different reasonings, but through analysis of the data it was acknowledged that both expressed joy or happiness that they desired, as well as tying a future general goal to their talent or interest.

### **Process**

During the second research session, youth were not made aware that they were going through an important uncovering process that resulted in the creation of a plan to carry out their goals. Through analysis of the data, it was found that youth were not being shown their ability to achieve initial success. This must be done so that youth’s motivation to succeed is sparked which will in turn increase their desire to carry out their actionable plan for their future. Youth are not used to engaging in deeply reflective activities such as these and therefore may not understand the full impact that they can have if they are not shown.





### 9.3 >> Synthesis #2

It was the intent of this research to find a way for at-risk urban youth to uncover their latent talents and interests utilizing co-design. In order to do this, youth needed to dig deeply to uncover their hidden talents and interest through a series of scaffolded activities as they did in the first research session. After insights had been gained through analysis, an additional step to analysis was made to document pivotal moments within the research.

As performed in the first research session, below are the insights gathered from the data categorized into five main groups: *Prompting*, *Methods*, *Tools*, *Environment* and *Process*. session with at-risk urban youth at Crispus Attucks.



## Prompting

Prompting was highly repositioned between the first and second research session, however the addition of adding more emphasis on happiness and “why” questioning helped facilitate youth through the intended process of uncovering their latent talents and interests and tying to those to future goals that will make them feel fulfilled.

In the third research session, even further emphasis on happiness and “why” prompting took place throughout the activities by engaging youth in questioning whilst they are working on their listing, collages, semantic differential, and user journey map. In addition to enabling youth to dig deeper into their values, it can create a bond and trust between the facilitator and youth by creating more opportunities for sharing and understanding. Here, a facilitator will want to approach youth with an empathic mindset<sup>+</sup> so that youth feel more willing to open up.

Youth can also be made to feel safer to open up by understanding the role and background of the session facilitator. Helping youth to open up by sharing personal details of oneself can be known as being empathetic. This is an important skill for a design facilitator to possess when working in a people-centered process. Empathy is defined by the Stanford d. School<sup>+</sup> as “when you can feel what another person is feeling. Empathy is the foundation of a human-centered design process; by deeply understanding people we are better able to design for them.” Empathizing with youth can help to discover their expressed and latent needs so that they can be met through the research session.

<sup>+</sup> Refer to appendix page 195 for a full list of a design facilitator’s mindsets, skills, and characteristics

<sup>+</sup> Stanford d. School in Stanford, CA, offers innovative, design thinking led courses focused on people-centered design

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In the next research session, time will be set aside specifically for youth to be able to ask questions about the session as well as about the facilitator. By being open with the youth, this will start to establish their trust and gain their buy-in to the co-design process at the beginning of the session. If the facilitator is more open and willing to share, the hope is that the youth will be as well.

## Methods

While analyzing the second session research data, it was found that although youth were successfully generating plans for their future goals that could fulfill them, they were mapping out very few steps between their current state and their desired state. Youth were making large leaps from “graduate college” to “get a job” when in fact there are many smaller steps within and between those two goals. Therefore, this led to the addition of an Actionable Planning activity as a take-away<sup>†</sup> after the third research session. The goal of this activity is to give youth the opportunity to take their user journey maps with the added knowledge from their peers, from the *round robin* activity, and restructure their plan so that they can add more actionable steps to get them to reach their broader goals.

<sup>†</sup> A take-away refers to the fact that the youth did not stay in the session and complete the actionable planning booklet but instead took it with them when they left and were told to return it at a later date

In his book *Simplex: A flight to creativity*, Min Basadur discusses the importance of creating a specific action plan. He explains that one reason we put things off is because we fail to translate our ideas into simple, specific action plans. Without this type of action plan, ideas will remain abstract and a pathway to reaching our goals is not generated.

According to Basadur, the more specific, clearly understood, and realistic a plan, the more motivated and committed people are to accomplishing it (Basadur, 1994). Therefore, by giving youth the opportunity to turn their 3D *user journey mapping* goals into more specific, actionable goals, this will give them the motivation to want to carry out their plans and ultimately, lead them toward the path to self-fulfillment.

## Tools

In the second research session, youth still did not feel like the magazines that were provided for the collaging activities were relatable for their age and race. In addition to the magazines provided in the first and second session, the decision was made to also offer magazines such as *Essence* magazine, a lifestyle, fashion, and beauty magazine for African-American women, and *Seventeen* magazine, a similar magazine targeted toward teenage girls. Both of these magazines were specifically requested by youth and would be provided in the next research session.

## *Environment*

During the second research session, youth did not demonstrate joy or entertainment by the music that was played. Music is an important part of youth culture and therefore should reflect their personal taste. Therefore, in the third research session, youth would be allowed to choose their own music and have it played throughout the appropriate times in the session such as during the generative activities when they are working.

Youth were also confined in large part to two tables in the middle of the room throughout the second research session. Although they were given more opportunities to get up in the space and move around they were not given the opportunity to place themselves wherever they felt most comfortable. Giving youth the ability to move around the space in whatever way they choose can potentially increase their creativity, productivity, and self-efficacy, as discussed previously in the first round of synthesis. Therefore, in the third research session youth will be prompted to move about the same space in whatever way makes them feel most comfortable.

## *Environment*

During the second research session, youth were not being shown their ability to achieve initial success, which is done so that this will spark their motivation to succeed, and hopefully their desire to carry out their action plan. In the third research session, youth will be given a short recap by the facilitator at the beginning so that they can start to reflect on the entire session as a whole. Then, the facilitator will use one or more youth, dependent on time constraints, and lead them down a line of why questioning. An example of this could be, but is not limited to,

- *Which talent/interests did you choose to focus on?*
- *Why did you focus on these?*
- *Why do you think these will make you happy?*
- *What is the goal you have tied them to?*
- *Why will that make you happy?*
- *Why do you want to \_\_\_\_\_ (specific goal)?*

## 9.4 >> Outcomes #2

This research session took into account all of the changes that were captured during analysis and synthesis of the first session research data. In this session, youth were able to successfully plan out how they can utilize their talents and interests in order to reach their goals that can provide them fulfillment.

However, youth were still unable to create actionable planning steps within their user journey map. Therefore, during the synthesis of the third planning framework,<sup>†</sup> another step was created to give youth a take-away actionable planning booklet in order to break their larger goals down into many more specific goals. The addition of this actionable planning step yielded a change in the research question as well (*refer to figure 9.2*).

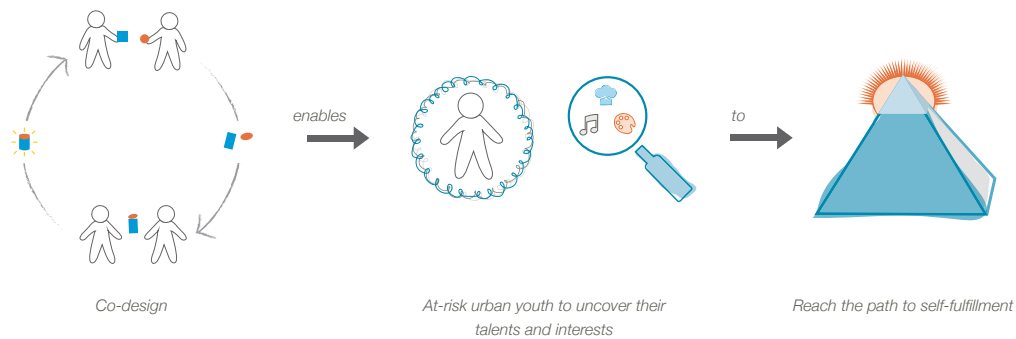
<sup>†</sup> Refer to appendix page 196 for the third research session planning framework

This research is no longer just focused just on the uncovering at-risk urban youth's talents and interests. Now the focus has shifted to incorporate the use of an actionable plan as a way to propel youth toward their future goals. However, this uncovering of their latent talents and interests and tying them to strong underlying values is important so that youth focus their goals and plans around those that make them happiest. This is to avoid the inclination youth have at times to appease authority figures by giving them more traditional goals and values such as "go to college" instead of the youth's innermost thoughts and feelings.

fig 9.2 Research question evolution

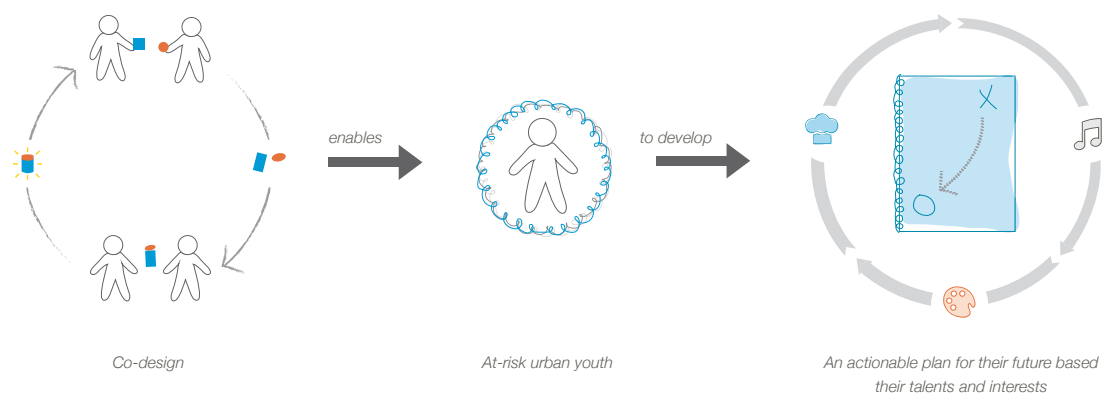
### Old

How might the utilization of co-design enable at-risk urban youth to uncover latent talents and interests in order to lead to self-fulfillment?



### Current

How might co-design enable at-risk urban youth to develop an actionable plan for their future based on their latent talents and interests?

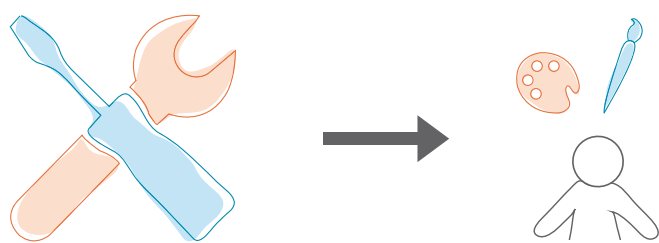


According to Gewirth’s definition of self-fulfillment, there are two parts to reaching such a goal. It is the uncovering of what one is truly interested in and good at, and then the *utilization* of those talents and interests. By giving youth a step that includes an actionable plan does not guarantee that they will reach self-fulfillment, however, it does give them the opportunity to reach the path. This is done by helping them to create a step-by-step plan that they can follow to reach their intended goals by utilizing the talents and interests that truly make them happy.

*Answering research sub-questions*

While some of the research sub-questions have still gone unanswered, after the analysis and synthesis of the second research session, the second sub-question could be answered:

*Sub-question #2*  
*How might tools and methods enhance inherent creativity in at-risk urban youth?*





Within the first two research sessions, youth indicated that they enjoyed working with the creative supplies to express themselves on their collages. While some of the tools, such as magazines, weren't as relatable to youth they still preferred the freedom of choice in choosing the imagery from the magazines rather than having pre-selected photographs available for them. Although this may have made searching for imagery easier, this would've potentially stereotyped at-risk youth by providing them pre-selected images. Therefore, youth's creativity was enhanced by giving them the choice with imagery selection, as well as other creative supplies.

The methods were also structured so that youth could engage in them in whatever way they felt most comfortable and whatever made them feel more creative. If youth preferred drawing versus using the 3D supplies in the *user journey mapping* activity they were allowed to draw. In addition to using the playdough and building blocks if they chose. Giving youth the freedom to express themselves in a manner of their choice can in fact result in an increased sense of self-efficacy and creativity.

The *3D user journey mapping* activity was designed so that youth could engage in the act of making and creating with their hands, which increases the feeling of creativity as well.

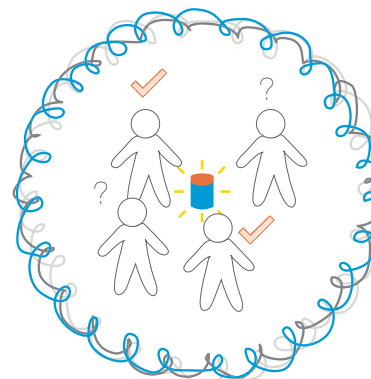
“Make methods enable creative expression by giving people ambiguous visual stimuli to work with. Being ambiguous, these stimuli can be interpreted in many different ways, and can activate different memories and feelings in people. The visual nature liberates people's creativity from the boundaries of what they can state in words. Together, the ambiguity and the visual nature of these tools allow people room for creativity, both in expressing their current experiences and feelings and in generating new ideas.”- Liz Sanders (Sanders, 2005).

After the second research session, the third sub-question could also be answered:

### *Sub-question #3*

How might at-risk urban youth establish buy-in to the collaborative co-design process?

This was accomplished by giving youth the opportunity to first build trust with the session facilitator by asking questions about the session as well as personal questions. By answering these questions, this built a bond between the facilitator and the youth. Then, leading youth directly into the *build-a-tower* activity demonstrated to them the benefits of working with a group. Collaborative buy-in was also achieved through the session by moments of brief sharing and the *round robin* activity where youth demonstrated their ability to give feedback to one another and benefit from that feedback from the collective input. Youth were also eased in to activities, which were carefully scaffolded in order to do so. For example, youth were given time to become acclimated to working with a group by creating small group engagements throughout the session that increased in length and depth. At the end of the session, the longest and most in-depth engagement was the group discussion where youth were prompted while sitting at a table and talking with the facilitator and each other. Participants were also eased into working with the creative supplies so as not to overwhelm them. They were given the freedom to work with the supplies however they chose, as well as giving access to these tools incrementally throughout the entire session. By providing more freedom to youth throughout the second research session, this increased their feeling of ownership and therefore helped to gain their buy-in to the process.

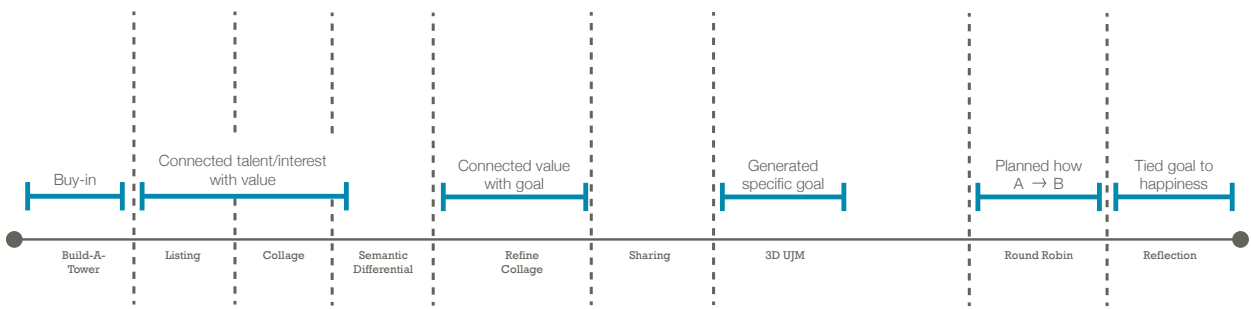


Pivotal moments in research

During analysis, after the second research session, an additional step was added to document pivotal moments that occurred throughout the second session. This was done in order to understand at what specific points youth were reaching the intended session goals and how they were reaching those. <sup>+</sup>Refer to figure 9.3 for a visual representation of the second session youth took part in.

<sup>+</sup> Refer to appendix page 197 for a full list of session goals broken down by activity

fig 9.3 Research session #2 outcomes



This diagram shows at what points youth were able to meet the expectations of the second research session. In the beginning of the session, youth established buy-in to the collaborative process by being given the opportunity to ask questions about the facilitator and the session itself. This is where trust began to be established which later informed the youth’s ability to open up in the environment to each other and the facilitator. Further buy-in was established while working through the *build-a-tower* activity. Youth worked separately as there were only two of them. While building their towers, they had to be re-built several times because they kept tumbling over. Afterwards, they indicated how much easier it would have been to have another team member.

After the *build-a-tower* activity, youth were expected to start to connect their talents and interests to underlying values. This was done by *free-listing* their talents and interests while being prompted by the facilitator to think about why they are interested in or talented at something or by listing different facets or applications of their talents and interests. By collaging those that were listed, as well as starting to link the talents and interests to happiness during the semantic differential, youth connected their superficial answers to that of underlying values.

Through the *refined collage*, youth had already converged on a few talents and interests and were then asked to visually represent these in different ways on their new collage sheet. They were able to start thinking about their future and how their talents and interests could inform their goals. During *user journey mapping*, youth then generated a specific goal by describing how they would use their talents and interests in the future. Then, by making a visual map, they broke their specific goal down into many more specific goals. This is where they planned how they would accomplish their goals on a broader, more general level.<sup>†</sup>

Through the *round robin* activity, youth started helping each other fill in the gaps in their user journey maps. They further planned out how they could accomplish their goals with the help of people and resources available to them. Finally, through the group discussion at the end, and the help of extensive why prompting, youth were able to verbally express that the reasoning behind their specific goal was to create a better life for themselves and because reaching this goal would make them happy.

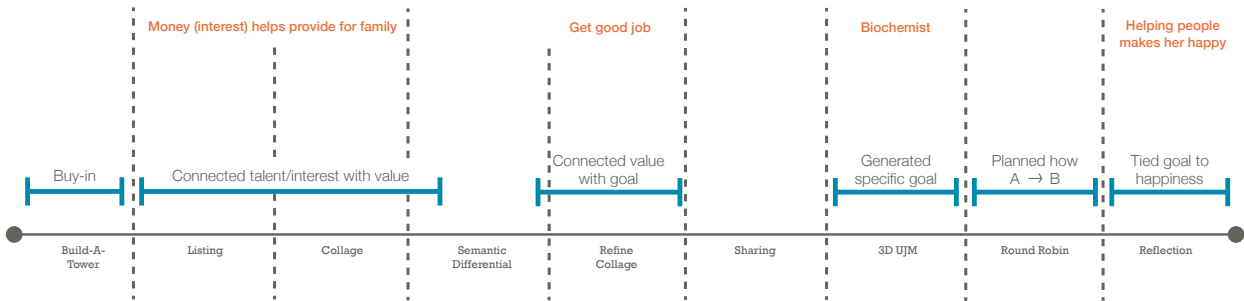
<sup>†</sup> Youth listed steps in their user journey map such as “graduate high school” without mapping out the steps necessary to complete that task. This was expected in this activity and therefore the presence of an actionable planning step was incorporated for youth to break down each larger step into many more specific steps

This final insight indicates that the creative, collaborative process youth are being led through is reaching the intended goals. Furthermore, youth successfully were able to uncover their latent talents and interests so that they could generate goals that will guide them toward the path to self-fulfillment.

Example process

Refer to figure 9.3 for a diagram which illustrates the process that one female youth went through in order to connect her talents and interests to a specific goal that will make her feel fulfilled in the future.

fig 9.4 Example youth second session process



While listing her talents and interests, the youth was asked why she was interested in “money” which she had written on her *free-listing* tool. She explained verbally that she liked expensive things and would like to buy expensive items in the future. She was then encouraged to write down some of the things that she could accomplish or buy with money. Through collaging, she visually represented money and was once again asked to add visual representations of things she could accomplish by having money. The youth placed a picture of a happy family and she indicated that she could in fact help support her current and future family, if she had money. Here, the youth was able to dig below her superficial interest of “money” to an underlying value of “providing for family.”

After the collage, youth were prompted to rank their talents and interests on their semantic differential tool sheet. This particular female rated money as a “five” on her happiness scale and when converging stated once again that she would like to be able to buy expensive things. When refining her collage based off this interest, she indicated that in order to get money she needed to get a good job. Here, the youth tied her underlying interests of buying expensive things and providing for her family to a general goal such as getting a good job. During *3D user journey mapping*, this youth chose to focus her attention on generating a specific goal and how she would reach it. In this case, the youth wanted to work as a biochemist and started to map out ways she could get such a job by “going to college” and “interning at Eli Lilly.” She further refined how she was going to accomplish her goals through the *round robin* exercise and the addition of new and helpful knowledge contributed from the other youth.

Finally, through group discussion, when lead through a series of why prompting the youth indicated that she wanted to be a biochemist so that she could help people. When asked further why she would like to help people, she stated that helping people makes her “feel good” and gives her “a purpose in life.”

By starting with a superficial interest such as “money,” this female youth was able to link this to a non-superficial value such as providing for her family, generating a specific goal such as becoming a biochemist, and linking that goal to her ultimate happiness of helping people in this world. Therefore, the youth was able to meet the session expectations and accomplish the action of achieving initial success in uncovering her talents and interests and using those to make a plan for her future. In the next research session, youth will be given the further opportunity to make their goals actionable, by completing an actionable planning booklet which will break each broader goal youth generated during *3D user journey mapping* into smaller more actionable goals.

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*Helping people makes me feel like I can improve someone else's life... like I can make a difference and have a purpose* >> Youth participant



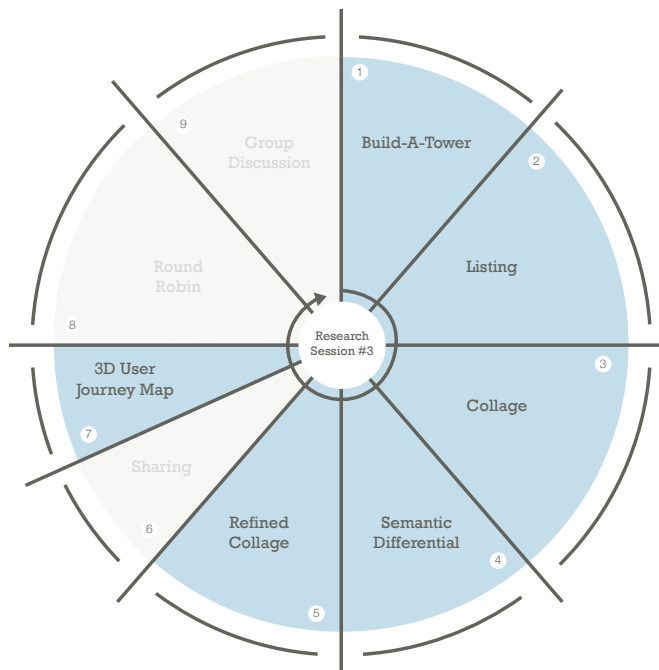
## { 10 } Research Session #3

After the second research session, another after-school session was held at Crispus Attucks Medical Magnet School in Indianapolis, IN with a total of eight youth; six 13- year-old females, one 12-year-old female, and one 13-year-old male. Upon the arrival of the youth, a brief schedule and a quick overview of “Best Team Practices” was presented to them.

After an initial introduction with youth, they were led through a series of scaffolded activities intended to uncover their latent talents and interests by utilizing their collaborative efforts and creativity. The previous research session was analyzed and the insights gained helped to synthesize a new research session framework, which was implemented into this session. *Refer to figure 10.1* for a visual of the process which illustrates that the same activities took place between the second and third sessions with the exception of one activity. However, the session did not start on time and therefore many activities had to be skipped. These are indicated in grey on the process wheel.

The following section provides an overview of the newly added Actionable Planning activity within the third research session with at-risk urban youth at Crispus Attucks.

fig 10.1 Research Session #3 process with skipped activities



## 10.1 >> Session #3

Youth were welcomed into the same large home-economics room as the first and second sessions where they were first offered pizza and snacks before the session began. They then sat at one of the large tables in the middle of the room while the purpose and the schedule of the session were described. Youth were then introduced to the “Best Team Practices” and reminded that they would be prompted to practice these at various times throughout the session. The following provides an overview of the new or adapted activities youth participated in.

## *Actionable Planning*

After youth went through the entire session process, as described in the second session, they were given the opportunity at the end to take an Actionable Planning Booklet with them and then turn it in four days later to a designated teacher. The third research session took place after school on a Thursday afternoon and the youth were instructed to return the booklet on Monday to their teacher. Before departing, youth were given instructions on how to transfer their user journey map to the actionable planning booklet and from there, create a more specific action plan. They would start by writing down the first step to reaching their goal that they stated on their user journey map. From there they were to break down that step, such as “go to college”, into three more specific steps they needed to take to accomplish this. The intent was for youth to write down steps such as:

“Go to college”

Step 1 “Go to the tutoring center to get good grades”

Step 2 “Ask a teacher about which colleges to apply to”

Step 3 “Graduate high school”

These are three more specific steps youth could take in order to reach the broader goal of “go to college.” They were then instructed to, within the actionable planning booklet template, write down persons **who** may be involved and could help them accomplish each smaller specific goal, **where** each step will be done (such as Indianapolis or home computer), and finally **when** each step will be completed.



All eight youth took an actionable planning booklet with them and said that they would return them by Monday. However, only one youth returned their booklet with their name on it and nothing written on the inside. This was not the intended outcome from this activity however, it pointed to some interesting insights that will be discussed later in analysis.

Thank you for participating in this research session held at Crispus Attucks High School!

During this session, you created a timeline or map of how you would like to reach your goals while using your talents, interests, and strengths and resources that can help you along the way. Be as detailed as possible so that you can take this plan and make your dreams a reality.

For this worksheet, you are now going to make that plan more detailed. Below is a table where you can list each step you are going to take in order, who will be involved in each step, where each step should be completed and when these occur.

Name: \_\_\_\_\_

What will be done?	Who will be involved?	Where will this be done?	When will this be done?
<b>Example:</b>			
1. Graduate school	- Advisor (Patricia N.) - Other professors (Tami W., Dr. G.) - Youth at Crispus Attucks Medical Magnet School - Mr. Mosby - Learning Center Teacher - Ms. _____	- Crispus Attucks Medical Magnet School - LPSH	- April 13, 2015
2. Finish thesis project	- Ms. _____ - Advisor (Patricia N.) - Other professors (Tami W., Dr. G., Aaron G.) - My parents for support - Other students for help (Nick W.)	- LPSH - My laptop - My home - Online research - Books for research	- April 24th, 2015 by 5:00 PM
3. Finish writing thesis paper	- Ms. _____ - Advisor (Patricia N.)	- LPSH	- End of this school year
4. Get good grades in classes	- Ms. _____ - Advisor (Patricia N.)		

## 10.2 >> Analysis #3

It was the newly established intent of this research to find a way to enable at-risk urban youth to develop an actionable plan for their future, utilizing co-design, based on their latent talents and interests so that they can be guided toward the path to self-fulfillment. In order to do this, youth needed to dig deeply to uncover their hidden talents and interest, and make an actionable plan for their future through a series of scaffolded activities. After insights had been gained through analysis, an additional step was included to document pivotal moments within the research, such as youth successfully tying their talents and interests to underlying values and goals.

As documented in the first and second research sessions, below are the insights gathered from the data categorized into five main groups: *Prompting*, *Methods*, *Tools*, *Environment* and *Process*.

### *Prompting*

Through analyzing the second research session data, it was found that youth are not used to being given a platform to express themselves and talk about their hopes and dreams. They are also not used to an outsider taking a special interest in them personally. By positioning prompting to be highly curious, by asking and framing “why” questions, this gave youth an added sense of closeness and bonding with the facilitator.





Affinity Diagramming



Also, interacting with the youth by asking them questions and allowing them to open up and tell their personal stories while they worked on the activities gave them a sense of personal pride in what they were able to accomplish within the session. It is important for a future facilitator to approach the interactions with youth from an open and empathic mindset so that youth feel comfortable engaging with and opening up to the facilitator.

Youth also reacted positively to being asked questions throughout the research session that demonstrated their knowledge of the subject matter. For example, when given the definition of a talent and an interest within the listing activity, one youth shouted out the difference before the definitions were even read. This indicated that youth want a way to show off what they do know and this in turn stimulates their self-efficacy by making them feel good and accomplished. This is an important prompting mechanism so that youth will be further stimulated to want to excel throughout the session, by completing the activities and making actionable plans for their future.

During the analysis of the second research session, it was found that youth must

be shown that they have succeeded throughout the session and therefore have achieved initial success. In

the third research session, due to time constraints, there was not a group discussion at the end and instead the facilitator roamed around the room while youth were finishing their user journey maps, in order

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*Youth must be shown that  
they have succeeded*



One youth was able to recap the session and when pointed out that she had successfully tied her talents and interests into a future plan that will make her happy, she expressed excitement by stating that she was eager to start fulfilling her dreams. She also indicated how the plan will make it easier for her to accomplish her goals. This also indicated that a more specific action plan, had she filled out the booklet, could have helped her even further to fulfill her goals.

### **Tools**

During the *3D user journey map* activity, youth were given the same supplies given in the second session however, this time youth were not given an example to look at. This was done in order to not sway the youth toward any “correct answer” when it came to their creative expression. However, due to the lack of an example, youth struggled with the idea of creating a 3D user journey map and many of them had questions before the activity began. They stated that they were very confused and when given time to work they seemed hesitant and withdrawn from the activity. Youth were afraid to take on a task and do it wrong, and therefore didn’t always give their all if they felt uncomfortable during an activity. This indicated that youth must be shown examples of work so that they have some direction and expectations of what it is they should be accomplishing.

Youth also struggled with the idea of being “visual” throughout the collage activities, as this was not defined for them. It was wrongly assumed that youth would understand what it means to be visual and specifically how that translates into creative expression. Youth are not used to engaging in creative activities such as these and turning abstract concepts (such as talents and interests) into imagery, whether that be drawn or selecting imagery from magazines.. Therefore, youth must be taught what it means to be “visual” and how it is they can apply this skill to the session activities.

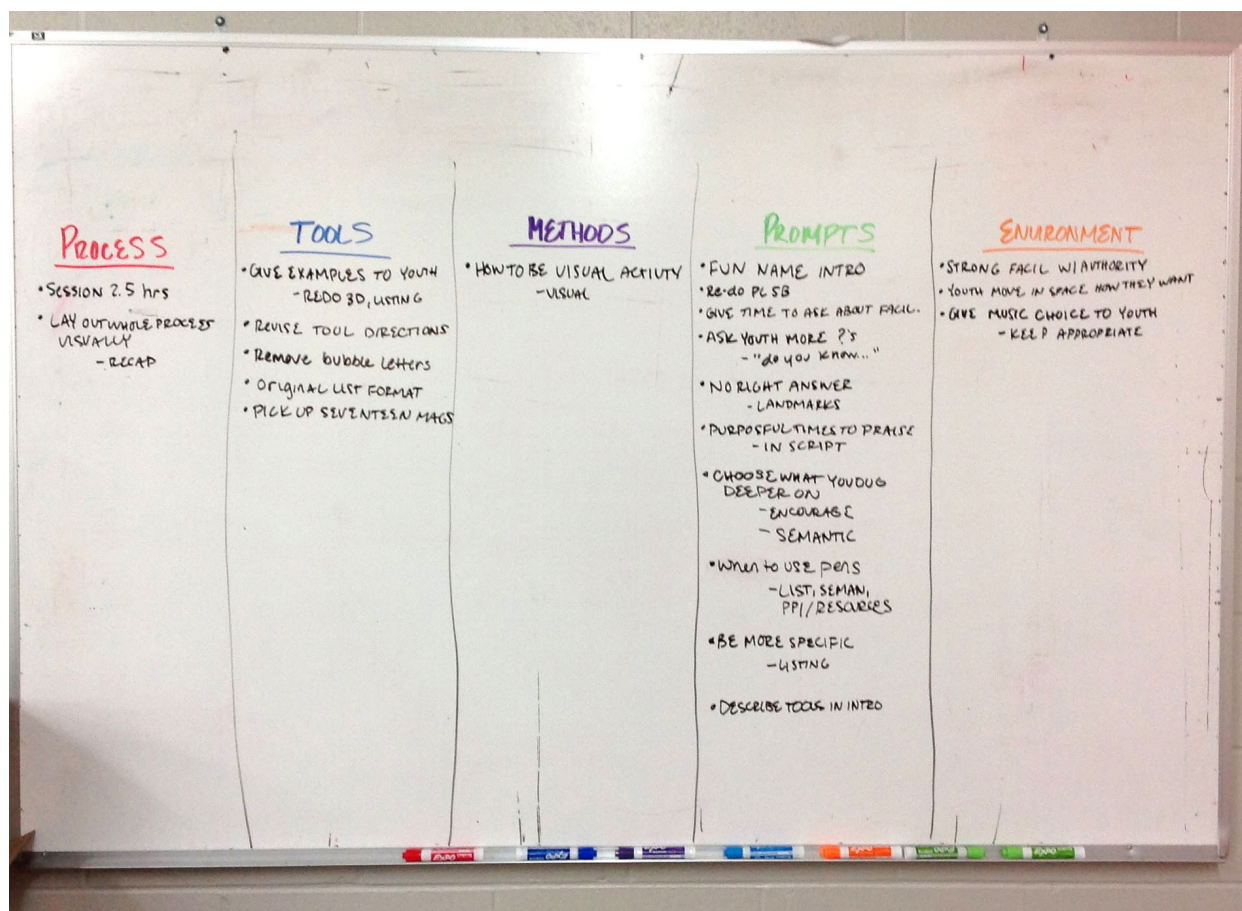
### *Process*

During the third research session, an actionable planning step was added by creating a takeaway booklet for youth to fill out and return a few days later. However, youth did not complete this task, of unknown reasoning, and therefore did not benefit from the creation of a specific actionable plan. This indicated that youth got caught up in the hectic nature of their own lives over the weekend and did not put the actionable planning step as a priority. At-risk urban youth tend to lack much structure in their lives and it is hard for them to carry out an activity that is not directly put in front of them. Therefore, the addition of an actionable planning step is still important, however, it must occur during the session in order to ensure it is completed.

### 10.3 >> Synthesis #3

After analysis was complete and insights and pivotal moments were documented based on patterns observed in the research, changes that needed to occur from the first research session to the second were developed. These necessary changes were documented in order to synthesize and strengthen the final solution implementation session with youth. As documented in the first and second research sessions, below are the insights gathered from the data categorized into five main groups: *Prompting, Methods, Tools, Environment* and *Process*.

Below are the changes made in the research process and session that were informed by the insights gained. These are categorized into five main groups: *Prompting, Methods, Tools, Environment* and *Process*.



## Process

Prompting was slightly repositioned for the final implemented solution based on the analyzed findings from the third research session. Prompting was repositioned to include more opportunities to ask youth questions such as “do you know the difference between a talent and an interest?” enabling them to show off their knowledge stimulates their self-efficacy by making them feel good and accomplished. More opportunities were structured in the final implementation for youth to show off their own knowledge

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## *Telling stories puts ideas into context and give them meaning* >> Tim Brown

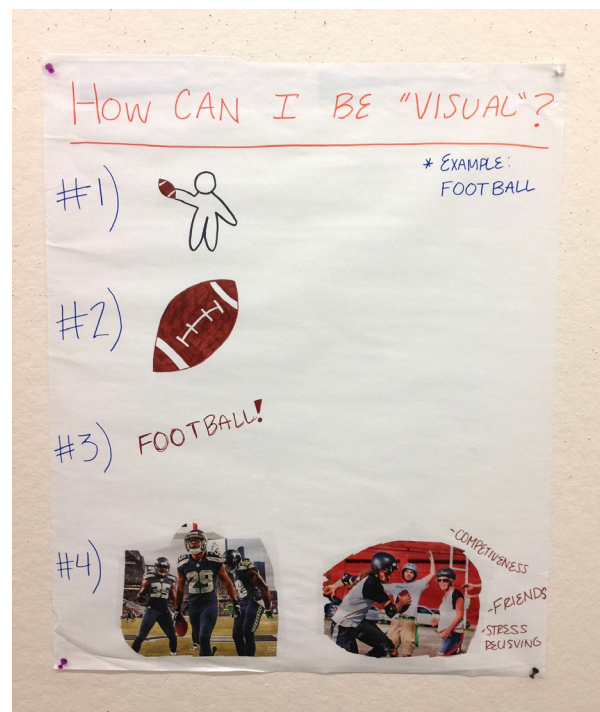
More opportunities to engage youth in storytelling by being highly interactive with them during the activities was created in the final solution as well. Giving them the opportunity to tell their stories gives youth a platform to open up, which can lend to success in digging deeper past their superficial talents and interests to their underlying values. Tim Brown discusses the practice of storytelling in his book *Change by Design*. He addresses its benefits by stating that stories put “ideas into context and give them meaning,” and therefore are essential to design thinking (Brown, 2014). By giving youth the chance to tell their own stories, this takes the abstract idea of their talents and interests and turns them into meaningful stories that are able to facilitate the youth digging deeper to reach their underlying values. Once these values have been identified, youth can use these to shape future goals so that they can start to work toward the path to self-fulfillment.

## Process

Through analysis, it was found that youth struggled with the application of the 3D supplies during *user journey mapping* because they did not have an example to look at. In order to avoid this in the final solution, youth will be given an example of every tool to look at before beginning each activity. This includes *free-listing*, *collages*, *semantic differentials*, *refined collages*, and *user journey maps*. This will give youth direction and expectations of what they should be accomplishing.

Youth also struggled with the idea of being “visual” throughout the collage activities, as this skill was not defined for them. Therefore, in order to demonstrate this to youth, there will be a “visual” demonstration for them in the form of a chart (\*insert example chart photo). This will break down four different ways that one can be visual throughout all of the activities including:

- *Two symbolic types of drawing*
- *Word usage*
- *Photo usage*



This will be used as an example to demonstrate to youth different ways they can visualize their talents and interests. In a study conducted in the Arapahoe County juvenile system, it was revealed that 15% of incarcerated youth tested in the top three percentile on standardized intelligence scales. The majority of these youth exhibited a fluid or spatial learning style, which Silverman has coined the term “visual-spatial learning”<sup>†</sup> (Silverman, 2004). At-risk youth are more likely to be visual learners however, since the education system mainly addresses those who learn from hearing rather than seeing, they may not be used to being asked to express themselves visually. Therefore the visual demonstration will be given to the youth in order to facilitate their visual-spatial thinking.

<sup>†</sup> Visual spatial learners are those who think in pictures rather than word and therefore learn better visually because this is who their brain works

## **Process**

During the third research session, an actionable planning step was added through the development of a takeaway booklet for youth to fill out on their own time over the span of four days. They were given instructions for how to fill out the booklet and how to return it however, all failed to do so. Therefore, in the final solution this step will be incorporated into the session and will take place after the *round robin* activity and before the group discussion. This will be to ensure that youth complete this step while still under the guidance of a facilitator. The addition of this step will likely lengthen the entire session process by 15-20 minutes, however, in order to ensure youth complete this essential step, the session must be lengthened.

## 9.4 >> Outcomes #2

This research session took into account all of the changes that were captured during analysis and synthesis of the second session research data. In this session, youth were able to successfully plan out how they can utilize their talents and interests in order to reach their goals that can provide them fulfillment.

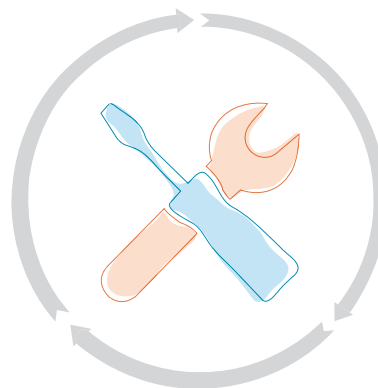
However, youth were still unable to create an actionable plan based off of their user journey maps due to the lack of completion of the takeaway booklet. Therefore, during the synthesis of the final solution planning framework, another step in the session process was created to give youth the opportunity to create their actionable plan while still engaged with each other and the facilitator. This step is done in order to break their larger goals down into many more specific goals, so that youth may easily follow their plan in accomplishing their main objectives.

### *Answering research sub-questions*

While the last research sub-question had still yet to be fully answered after analysis and synthesis of the third research session, the fourth sub-question could be answered:

#### *Sub-question #4*

*How might tools and methods be iteratively adapted and re-designed?*





Tools and methods were iteratively adapted and re-designed by the use of analysis methods such as *organizational process mapping* and *affinity diagramming*<sup>†</sup> and design synthesis. Utilizing these two analysis methods yielded important insights, which then could be used to create changes in the research action planning framework. These changes were documented at the beginning of the synthesis phase and were sorted into five main categories, *Prompting*, *Methods*, *Tools*, *Environment*, and *Process*. From there, a new research planning framework was synthesized and changes that occurred in the next session were documented in a different color than the rest of the framework. The reasoning for each change was also justified on the research planning framework.<sup>‡</sup> By going through these methods, the researcher was able to iteratively adapted and re-design tools and methods after each phase of research collection.

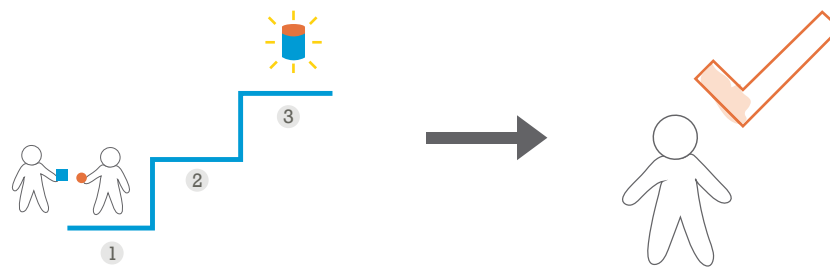
<sup>†</sup> Refer to page 50 For more information on these analysis methods

<sup>‡</sup> Each research planning framework used in this research was adapted from Collabo Creative

The fifth sub-question could also be answered after analysis and synthesis of the third research session:

*Sub-question #5*

*How might the scaffolding of collaborative activities with at-risk urban youth prime them for initial success?*



The scaffolding of activities was designed throughout the three research sessions with youth at Crispus Attucks. Throughout the sessions, activities were altered, adapted, and moved in order to correctly scaffold them so that youth could demonstrate initial success. The scaffolding of activities first started with having to gain the initial buy-in from the youth. This included buy-in and trust in the facilitator as well as to the collaborative, co-design process. Establishing trust during both of these occurred throughout the session, and was done so by increasing the amount of interaction and personal storytelling between the youth and the facilitator. This is a process which is started from the very beginning and takes place throughout the whole session.

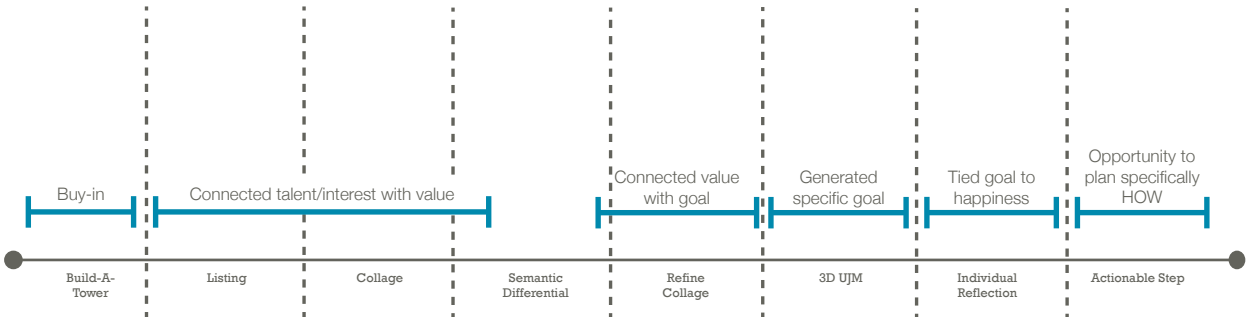
After buy-in has begun to be achieved, youth must start to diverge and recognize what their talents and interests are. Once they are aware of these, through the *free-listing* activity, they start to connect them with underlying values. First, youth must be aware of their talents and interests before being able to explain why they are interested in or talented at something. Once those values have been revealed, they must be connected with some type of general goal such as “get a job.” After youth communicate a general goal, they will state a more specific goal and go through a process of breaking it down into smaller steps that can take place in sequential order to accomplish their goal.

Finally, youth will engage in an actionable planning step within the session to plan out how they are going to accomplish their goals by further breaking them down, assigning who could help them, where their actions will take place, and when each step should be completed. This last step will serve as a demonstration that youth started with a vague idea of what they could be interested in and talent in, and in a short few hours went through a process to map out how they can accomplish the goals that will make them happy in their lives. This actionable planning booklet is something youth will be encouraged to take with them and actualize either on their own or with those who could help them. By giving this to youth as a tangible artifact they can take away from the session,, the intent is that they will see the benefit of going through the collaborative co-design process as a way to reach the path to self-fulfillment.

Pivotal moments in research

Similar to the second research analysis and synthesis phase, pivotal moments that occurred during the third research session were documented. This was done in order to understand at what specific points youth were reaching the intended session goals and how they were reaching those. Refer to figure 10.2 for a visual representation of the third session youth took part in.

fig 10.2 Research session #3 outcomes

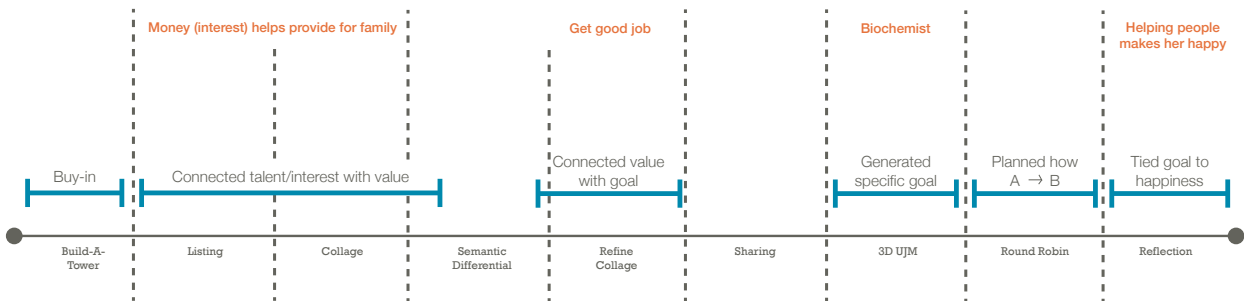


As you can see, this diagram shows at what points youth were able to meet the expectations of the third research session. The pivotal moments were accomplished at the same as in the second research session, even though youth did not get the opportunity to go through all the steps in the process due to time constraints. The addition of the actionable planning step also gave youth the opportunity to plan specifically how they are going to reach their intended specific goals by breaking them down into smaller, more manageable and achievable steps.

Example process

Refer to figure 10.3 for a diagram which illustrates the process that one female youth went through in order to connect her talents and interests to a specific goal that will make her feel fulfilled in the future.

fig 10.3 Example youth third session process



While listing her talents and interests, the youth was asked why she was interested in “babysitting” which she had written on her tool. She explained verbally that she thought it helped her to gain more experience in taking care of kids and babies. Through collaging, she wrote down “babysitter” and was prompted to add visual representations of what she could accomplish with her babysitting skills. She then wrote down “being a doctor” on her collage. This is where the youth was able to dig below her interest of “babysitting” to an underlying value of “being a doctor.”

After the collage, youth were prompted to rank their talents and interests on their semantic differential tool sheet. This particular female rated “babysitting” as a four on her scale but ranked “doctor” as a five, on a likert scale of one to five. This youth converged on her underlying value of “being a doctor” before moving onto the refined collage activity.

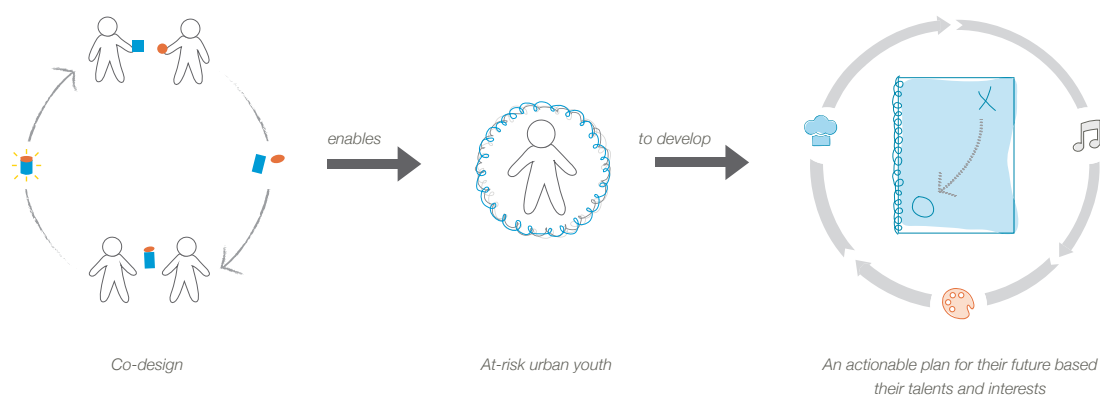


# { 11 } Discussion/Results

## 11.1 >> Overview

This research revolved around the use of collaborative and creative co-design activities as a way to enable at-risk urban youth to develop actionable plans for their future based off of their latent talents and interests. The following high-level review of the process describes how intended outcomes were accomplished.

fig 11.1 Research question visual



In each collection phase, the researcher played a central role as an active facilitator of co-design activities and methods.



In each collection phase, co-design activities and methods were executed by one central facilitator. Three after-school sessions were scheduled at Crispus Attucks Medical Magnet School in Indianapolis, in order to engage at-risk urban youth in a series of scaffolded creative and collaborative activities. Within these phases, it was ascertained that the original research question was not covering all of the steps to reaching the path to self-fulfillment. It was not just about uncovering youth's latent talents and interests but translating those into actionable specific goals for the youth to be able to take with them and actualize in order to lead to a path of self-fulfillment. As the sessions progressed, activities and tools were adapted, iterated, and re-designed in order to facilitate the creative, collaborative co-design process in order to answer the proposed research questions.

In each analysis phase, results from each research session were externalized and analyzed through a systematic process of *organizational process mapping* and *affinity diagramming*. Analysis served as a way to develop insights based upon the research data observations in order to inform the synthesis of a new research planning framework. The second round of analysis led to insights that informed a shift in the research question.<sup>†</sup>

<sup>†</sup> Refer to figure 9.2 for the shift in the research question

How might co-design enable at-risk urban youth to develop an actionable plan for their future based on their latent talents and interests?

Within each synthesis phase, the benefits of the co-design process were demonstrated through the research sessions held with at-risk urban youth. During synthesis, insights from analysis were externalized and translated into changes that needed to occur in the research planning framework. Synthesis methods enable the development of insights, especially ethnographic observations that lead to new, innovative, appropriate, or compelling ideas (Kolko 2010).

During synthesis, much of the youth's direct and indirect input informed decisions youth made while engaging in the co-design activities. For example, in each session youth were given the opportunity to make suggestions, such as the addition of 3D supplies in *user journey mapping*, which were taken into account when synthesizing each new framework. The power of co-designing this session with the youth comes from the ability to put youth at the core of shaping each session. The youth helped to inform the process by following activity instructions while giving their input and producing the intended outcomes for each activity.

Finally, in the final implementation phase, a refined solution was applied in the form of a process that youth work through in order to develop actionable plans for their future based off of their latent talents and interests. This final phase was carried out by an external facilitator, an educator at the Crispus Attucks Learning Center, in which the effectiveness of the facilitation scripting tool and the facilitator performance were evaluated.

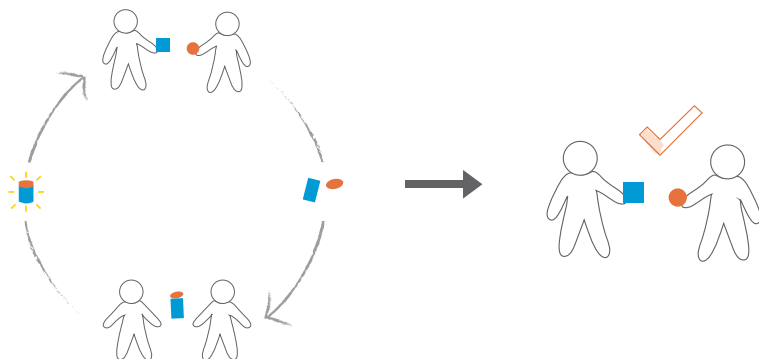
This evaluative phase yielded results in the form of a facilitator checklist, a tool that can be used to ascertain whether a person is appropriate to conduct such a session with at-risk urban youth while cross referencing their mindset, skills, and characteristics to that of a design facilitator.

**Answering research sub-questions**

After the design process was complete, sub-questions one through five were answered, and the final sixth research sub-question could be addressed.

*Sub-question #6*

*How does the use of co-design enable at-risk urban youth to define and achieve initial success by the act of collaboratively making or creating?*



Co-design is a methodology or a process where designers and people embedded in the context, work collaboratively in the design development process to create holistic solutions to problems (Sanders & Stappers, 2008). By including at-risk urban youth in the process of co-designing the outcome, it allowed for a more holistic solution. People, in this case at-risk urban youth, are the experts of their own lives and contain the knowledge necessary to help shape the session based on their needs, desires, and capabilities.

Employing co-design activities, which are collaborative and creative, helped youth to define and achieve initial success. By the youth working collaboratively with each other and a facilitator, they worked together to uncover the underlying values beneath their superficial talents and interests. They then went through a process of defining a specific goal and creating a plan to carry out that goal, so that they could be led to the path to self-fulfillment. Creative supplies helped youth to think imaginatively and in a more creative manner. In fact, Liz Sanders describes the collaborative act of making, telling, or enacting as “where innovation and change usually occurs.”

By leading youth through this process and helping them to see the demonstrated outcomes, such as their ability to successfully make an actionable plan for their future, this has helped youth to define and achieve initial success through co-design.

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*The collaborative act of making, telling, or enacting is where innovation and change usually occurs*

>> Liz Sanders

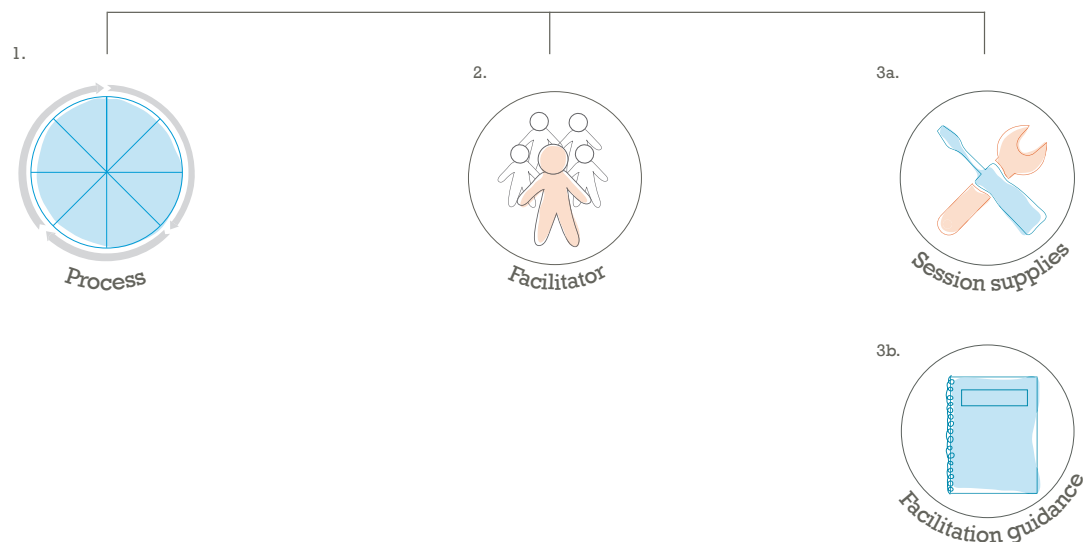
## 11.2 >> Final Solution

This research was intended to find a way to enable at-risk urban youth to develop actionable plans for their future based off of their latent talents and interests. This was done by co-designing a process with youth through three participatory, collaborative research sessions. During these sessions, youth participated in a series of creative, collaborative scaffolded activities which were aimed at connecting youth's underlying values to a specific goal, and then carry out that goal through the use of an actionable plan.

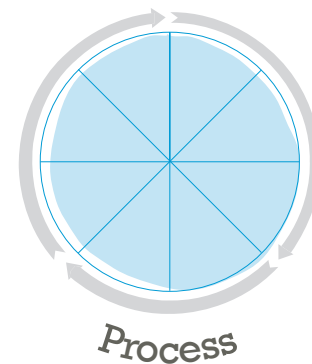
This research yielded a three-fold solution including:

- 1. Process** – A creative, collaborative process aimed at youth creating an actionable plan for their future by systematically uncovering their latent talents and interests
- 2. Design Facilitator**– A designer who leads youth through a creative, collaborative process in order to help them create actionable plans for their future
- 3. Tools**– Supplies given to youth throughout the process to facilitate their inherent creativity and process

fig 11.2 Final solution components



The first component of the final solution is the process. The *process* is made up of 10 activities that were carefully developed and scaffolded in order for youth to go through a *process* of connecting their talents and interests to their underlying values, connecting those values to future happiness, generating specific goals, and making those goals actionable. These steps can demonstrate to youth the initial success that they must be shown in order to spark their motivation to want to engage with their actionable plans and actualize them in order to steer toward the path to self-fulfillment.



The second component of the final solution is the role of a *facilitator*. At-risk urban youth do not possess the skills necessary to self-direct this process. Therefore, a facilitator is needed in order to guide youth through the process of making an actionable plan for their future based off their latent talents and interests. The facilitator must possess several mindsets, skills, and characteristics as discussed earlier.<sup>†</sup>



<sup>†</sup> Refer to appendix page 195 to see a full list of facilitator qualities.

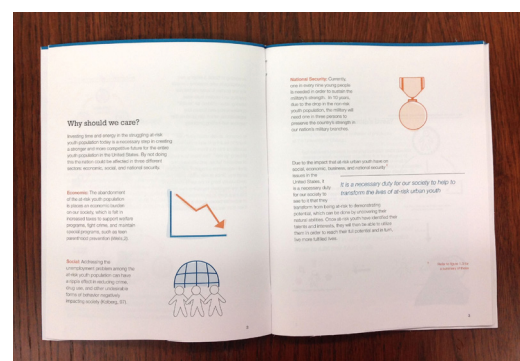
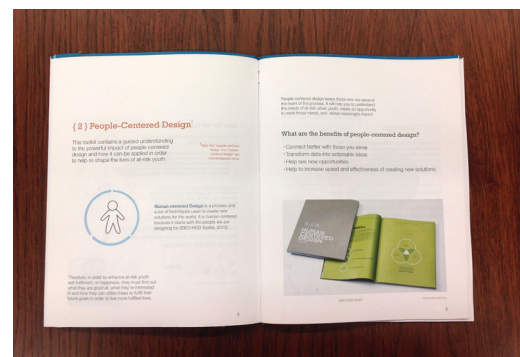
The third component of the final solution is tools.

The tools are broken down into two types:

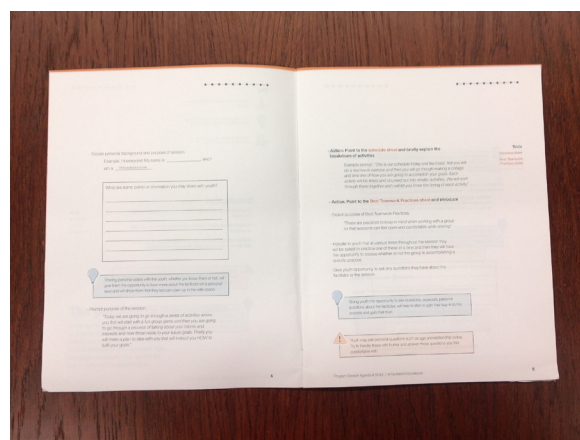
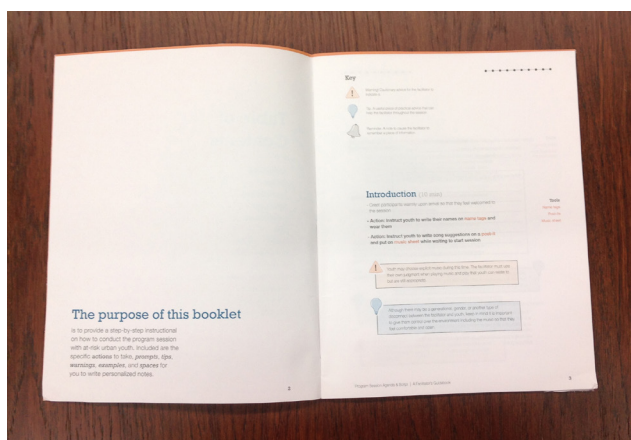
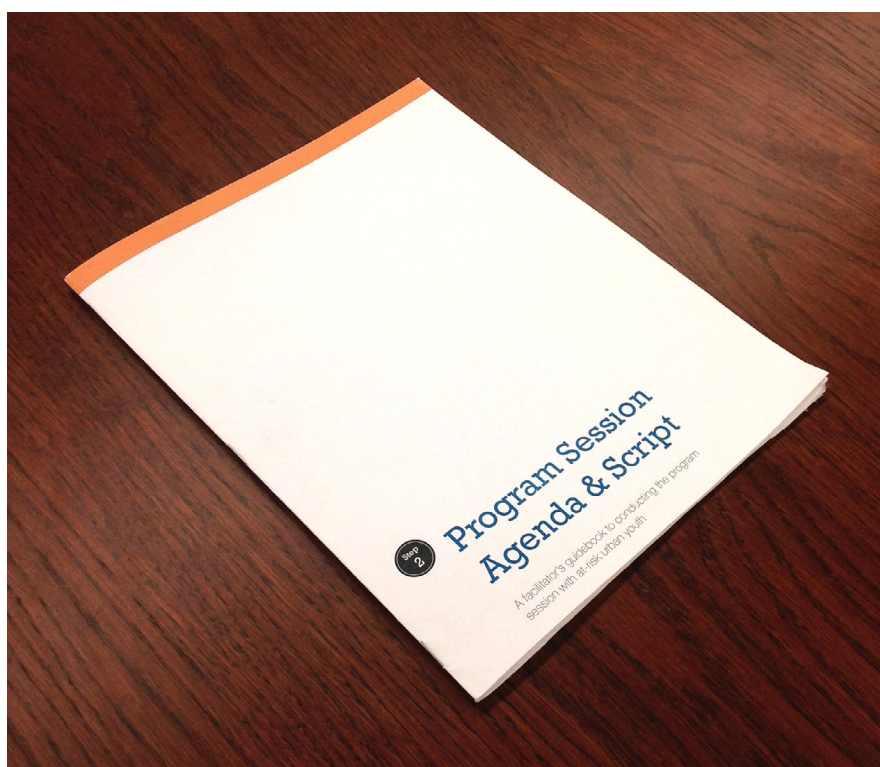
### 3a. Facilitator tools

### 3b. Session tools

**Facilitator tools** included those that a facilitator needs in order to carry out this process with at-risk urban youth. First is a the *Facilitator Guidebook*, which gives the facilitator an understanding of people-centered design, its applications, and who this process is specifically intended for. It also gives a brief explanation of how to use this solution, the benefits of it, and a facilitator checklist which is to be used to ensure that whomever is conducting the process with at-risk urban youth is fit for the role. This checklist is based off of the Mindset-Skills-Characteristics framework discussed earlier. This tool is intended for use prior to conducting the session with youth so that the facilitator has an understanding of the intent and specific activities and outcomes.







Another facilitator tool needed to carry out this process with youth includes a *scripting and agenda* tool. This tool was evaluated in the final implementation phase and after conducting a usability test, was adjusted for major and minor obstacles that were found during testing. This tool is intended for use before and during the session with at-risk youth. Before the session, the facilitator is instructed to read over the tool and fill in questions when prompted. These questions are posed so that the facilitator has the opportunity to personalize their script for the session. The script tool will then be utilized during the session and is to be followed as closely as possible, so that the facilitator can reach the intended goal of the session.

The rest of the facilitator tools include various visual models, landmark cards, landmark master sheet, and worksheets for the youth including:

- *Listing worksheet*
- *Collage sheet*
- *Semantic differential worksheet*
- *User Journey Mapping sheet*

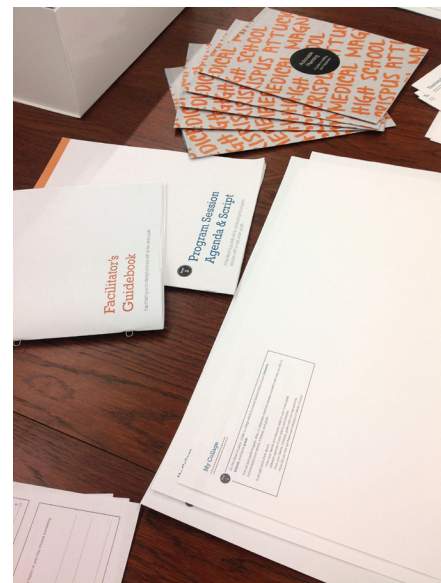
The session tools included those that the facilitator must supply during the session. This includes supplies such as:

- *Magazines*
- *Schedule sheet*
- *Post-its*
- *Markers*
- *Scissors*
- *Glue/tape*
- *Building blocks*
- *Playdough*





The final solution is presented as a toolkit. This toolkit comes equipped with the tools necessary for one to facilitate the process with at-risk urban youth. Therefore, the toolkit includes the facilitator tools, which help to inform and educate about the process, and the mindset, skills, and characteristics of a process facilitator.



### 11.3 >> Future Implications

Within the context of designing for social impact, including at-risk urban youth in the process becomes important due to the high influence they have on the outcomes of the process. Often when addressing social impact issues, one must consider how their designed solution could affect others and to what level is it transferable. With the growing interest in how creativity and collaboration can be used to shape peoples' lives, it is now more important than ever to consider extending the scope beyond at-risk youth for this solution.

The outcomes of this research are important when taking into account that the process was crafted alongside at-risk urban youth in Indianapolis. However, it has been revealed that this process could be useful for anyone who needs to redefine what makes them happy, how to set and accomplish newly stated goals, and how to carry those goals out with the help of an actionable plan. In other words people who are at a stage in their life wondering "Okay. What next?" This could includes groups of people such as:

- *Non-risk youth*
- *Adults in their early 20's*
- *Newly released military personnel*
- *40-year-old women past child rearing years*
- *Retirees*
- *Men at age 35 who are going through life transitions*

These groups of people are ones that are faced with having to redefine the trajectory of their lives and although it was not within the scope of this research, it would be interesting to see if this process were to work and how it would need to be adjusted for transferability purposes.

Although the focus of this research was to develop a holistic understanding of how co-design can help at-risk urban youth to develop actionable plans for their future based on their latent talents and interests, exploring another demographic could be the next step in defining what this could mean for a multitude of different people at similar stages in their lives.

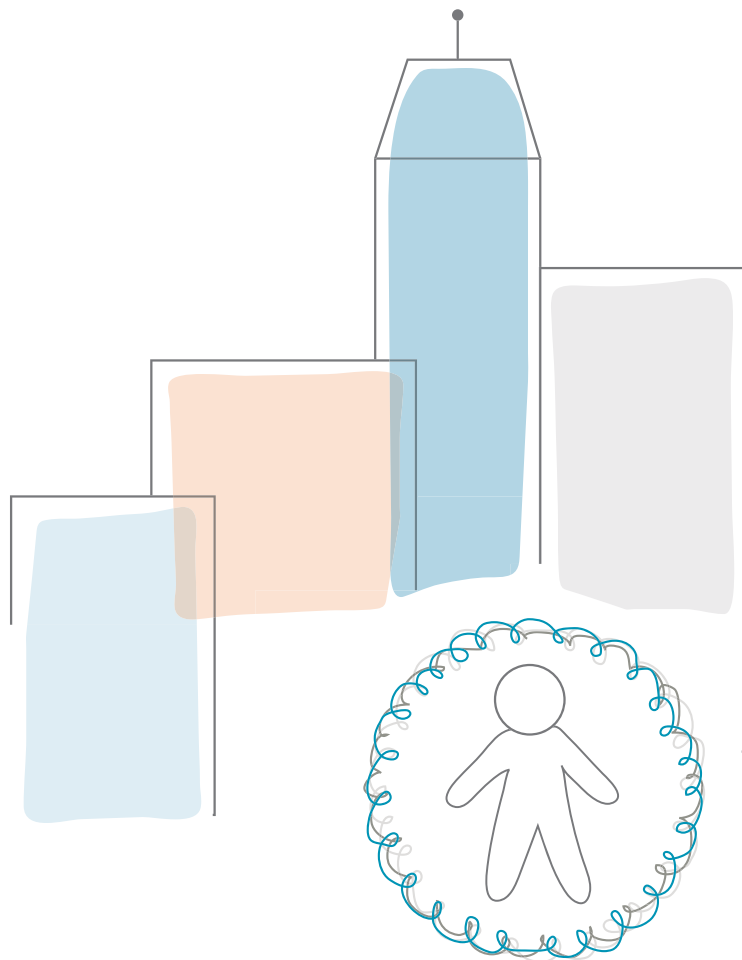
Another insight found from analysis and synthesis of the research data from each round of collection, was that even when the process had steps that had to be omitted, it was still working and youth were still able to successfully connect their talents and interests with underlying values, create specific goals, and tie these to happiness, all while being given the opportunity to also make a plan and eventually make that plan actionable. However, in the future, a closer examination of why exactly the process still works should be explored. Doing this could lead to the notion that one does not need all of the activities laid out in the process, and that the session time frame could be dramatically reduced due to this change in scaffolding. However, as the solution is currently designed, all youth who engaged with the process must complete the ten steps in order to be given the opportunity to put themselves on the path to self-fulfillment.

## 11.4 >> Conclusion

This research set out to explore how co-design can be used in order to enable at-risk urban youth to create actionable plans for their future based on their latent talents and interests. The final process solution contributes to the ever-growing area of designing for social change. By employing a people-centered, co-design approach throughout this research, this affirms the fact that these approaches yield value that is crucial for the development of our society and the at-risk urban youth population.

Research initially began by exploring existing measures already set in place for youth to assess what they are good at and interested in. Through primary and secondary research, it was ascertained that youth lack systematic ways of identifying their talents and interests and therefore have no way to know how to incorporate these into their future goals. Therefore, through this research, a process was developed, by assistance of youth, to help them work in a collaborative environment, meant to enhance their inherent creativity, so that they could work towards the path to self-fulfillment.

At-risk urban youth play a very important role in the United States society. Often times, they are over-looked or given very low expectations of success. However, the intent of this research was to fix this ever-growing social problem in the United States. By utilizing co-design, this gave youth the opportunity to work in a creative and collaborative space while generating an actionable plan for their future so that they can reach the path to self-fulfillment. Giving youth this opportunity for success has the ability to transform the way we look at this demographic as a society, as well as it has the power to transform the lives of at-risk urban youth by creating a significant and meaningful impact.





## { 12 } Bibliography

- <sup>1</sup> **Basadur, Min.** Simplex: A flight to creativity. [Buffalo, NY]: Creative Education Foundation, 1994.
- <sup>2</sup> **Barr, Robert D., and William H. Parrett.** How To Create Alternative, Magnet, and Charter Schools That Work. National Educational Service, 1252 Loesch Road, PO Box 8, Bloomington, IN 47402-0008, 1997.
- <sup>3</sup> **Berg, Bruce Lawrence, and Howard Lune.** Qualitative research methods for the social sciences. Vol. 5. Boston, MA: Pearson, 2004.
- <sup>4</sup> **Body, John, Nina Terrey, and Leslie Tergas.** "Design facilitation as an emerging Design skill: A Practical Approach." In Proceedings of Design Thinking Research Symposium, vol. 8. 2008.
- <sup>5</sup> **Brophy, Jere, and Thomas L. Good.** "Looking in classrooms." New York (1997).
- <sup>6</sup> **Brown, Tim.** "Design thinking." Harvard business review 86, no. 6 (2008): 84.
- <sup>7</sup> **Cancar, Ivana, and Darka Podmenik.** "Youth Unemployment: Should We Detect Talents and Develop Career Paths Earlier?." In Knowledge and Learning: Global Empowerment; Proceedings of the Management, Knowledge and Learning International Conference 2012, pp. 443-447. International School for Social and Business Studies, Celje, Slovenia, 2012.

- <sup>8</sup> **Checkoway, Barry, and Katie Richards-Schuster.** “Youth participation in evaluation and research as a way of lifting new voices.” *Children Youth and Environments* 14, no. 2 (2004): 84-98.
- <sup>9</sup> **Craig, Dorothy Valcarcel.** *Action Research Essentials*. Vol. 11. John Wiley & Sons, 2009.
- <sup>10</sup> “Crispus Attucks High School--Indianapolis: A Discover Our Shared Heritage Travel Itinerary.” National Parks Service. Accessed April 9, 2015.
- <sup>11</sup> “D.school: Institute of Design at Stanford.” Accessed April 10, 2015.
- <sup>12</sup> **Dobizl, Janis Kay.** “Understanding at-risk youth and intervention programs that help them succeed in school.” PhD diss., University of Wisconsin–Stout, 2002.
- <sup>13</sup> **Dubberly, Hugh, and Shelley Evenson.** “On modeling The analysis-synthesis bridge model.” *interactions* 15, no. 2 (2008): 57-61.
- <sup>14</sup> **Garbarino, James.** “The stress of being a poor child in America.” *Child and Adolescent Psychiatric Clinics of North America* 7, no. 1 (1998): 105-19.
- <sup>15</sup> **Gewirth, Alan.** *Self-fulfillment*. Princeton University Press, 2009.
- <sup>16</sup> **Hanson, Sandra L.** “Lost talent: Unrealized educational aspirations and expectations among US youths.” *Sociology of education* (1994): 159-183.
- <sup>17</sup> **Herr, Kathryn and Gary L. Anderson, eds.** *The action research dissertation: A guide for students and faculty*. Sage, 2005.
- <sup>18</sup> **Heskett, John.** *Toothpicks and logos: Design in everyday life*. Vol. 1. Oxford: Oxford University Press, 2002.

<sup>19</sup> “International Conference on Urban Youth at Risk: Strong Families, Caring Communities & Inclusive Cities: “The LAC Experience”” UN-HABITAT: United Nations Human Settlement Programme. Accessed September 19, 2014.

<sup>20</sup> **Jarjoura, G. Roger, Ruth A. Triplett, and Gregory P. Brinker.** “Growing up poor: Examining the link between persistent childhood poverty and delinquency.” *Journal of Quantitative Criminology* 18, no. 2 (2002): 159-187.

<sup>21</sup> **Kolberg, William H.** “Employment, the private sector, and at-risk youth.” *The Annals of the American Academy of Political and Social Science* (1987): 94-100.

<sup>22</sup> **Kumar, Vijay.** “A process for practicing design innovation.” *Journal of Business Strategy* 30, no. 2/3 (2009): 91-100.

<sup>23</sup> **Larson, Reed, Kathrin Walker, and Nickki Pearce.** “A comparison of youth-driven and adult-driven youth programs: Balancing inputs from youth and adults.” *Journal of community psychology* 33, no. 1 (2005): 57-74.

<sup>24</sup> **Mattelmäki, Tuuli, and Froukje Sleeswijk Visser.** “Lost in Co-X: Interpretations of Co-design and Co-creation.” In 2011). *Diversity and Unity, Proceedings of IASDR2011, the 4th World Conference on Design Research*, vol. 31. 2011.

<sup>25</sup> **McDougall, Sean.** “Co-production, Co-design and Co-creation: What Is the Difference?” *Stakeholder Design*. January 11, 2012. Accessed November 15, 2014.

<sup>26</sup> **McKinney, S. E., et al.** “Responding to the needs of at-risk students in poverty.” *Essays in education* 17.5 (2006).

<sup>27</sup> **McMillan, James H., and Daisy F. Reed.** “At-risk students and resiliency: Factors contributing to academic success.” *The Clearing House* 67, no. 3 (1994): 137-140.

<sup>28</sup> **McWhirter, J. Jeffries.** At-risk Youth: A Comprehensive Response: For Counselors, Teachers, Psychologists, and Human Service Professionals. 3rd ed. Pacific Grove, CA: Brooks/Cole Pub., 2004.

<sup>29</sup> “Method 3 of 100: Freelisting.” ‘Designing the User Experience at Autodesk’ Accessed April 10, 2015.

<sup>30</sup> “Project H.” Project H: If You Build It. January 1, 2013. Accessed December 3, 2014.

<sup>31</sup> **Sanders, Elizabeth B-N.** “Information, inspiration and co-creation.” In Proceedings of the 6th International Conference of the European Academy of Design. 2005.

<sup>32</sup> **Sanders, Elizabeth B-N., and Pieter Jan Stappers.** “Co-creation and the new landscapes of design.” Co-design 4, no. 1 (2008).

<sup>33</sup> **Sanders, Elizabeth B-N., and Pieter Jan Stappers.** Convivial toolbox: Generative research for the front end of design. BIS, 2012.

<sup>34</sup> **Schön, Donald A.** “Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.” San Francisco (1987).

<sup>35</sup> **Shawn, Monica H., and Robert M. Bossarte.** “Assessing and quantifying high risk: Comparing risky behaviors by youth in an urban, disadvantaged community with nationally representative youth.” Public Health Reports 124, no. 2 (2009).

<sup>36</sup> **Silverman, Linda Kreger.** “At-risk youth and the creative process.” In ARTernatives for At-Risk Youth Conference, May, vol. 14. 2004.

<sup>37</sup> “Situations That Put Youth At Risk.” National Dropout Prevention Center/Network |. Accessed September 18, 2014.

<sup>38</sup> “Start An Education Revolution In Seven Steps.” Co.Design.  
August 12, 2011. Accessed September 9, 2014.

<sup>39</sup> **Stickdorn, Marc**, and **Jakob Schneider**. This is service  
design thinking: Basics, tools, cases. Wiley, 2011.

<sup>40</sup> Toolkit, Human Centered Design. “Idea.” Retrieved on 24th November (2008).

<sup>41</sup> **Wells, Shirley E.** At-risk youth: Identification, programs, and  
recommendations. Engelwood, CO: Teacher Ideas Press, 1990.

## { 13 } Appendix

### 13.1 >> Literature Review

Basadur, Min. Simplex: A flight to creativity. [Buffalo, NY]: Creative Education Foundation, 1994.

Basadur lays out a framework known as the “Simplex Process” which is intended to release creativity and innovation in individuals, groups and organizations. This process helps to define problems, ideate on solutions, and put those solutions into action.

Throughout this research, his process was adapted and synthesized with other design processes in order to create the collection-analysis-synthesis-implementation model used.

**Barr, Robert D., and William H. Parrett.** How To Create Alternative, Magnet, and Charter Schools That Work. National Educational Service, 1252 Loesch Road, PO Box 8, Bloomington, IN 47402-0008, 1997.

A comprehensive review which details developments in alternative, charter, and magnet schools. Barr and Parrett discuss insights and practical strategies needed for effective alternative education programming. An overview of the ten essential elements of a successful alternative school, 64 evaluation criteria for assessing a school, 15 strategies to implement in an alternative school, are also discussed in detail.

**Berg, Bruce Lawrence, and Howard Lune.** Qualitative research methods for the social sciences. Vol. 5. Boston, MA: Pearson, 2004.

This text serves as sort of how-to guidebook for researchers to learn to design, collect, and analyze qualitative data. Berg and Lune also discuss action-based research as one of the few approaches which sets out to embrace principles of participation, reflections, empowerment, and collaboration of people who are interested in improving their social situation.

This research is framed as action-based and therefore included the participation of at-risk urban youth in order to create meaningful solutions to an ever-growing social issue.



**Body, John, Nina Terrey, and Leslie Tergas.** “Design facilitation as an emerging Design skill: A Practical Approach.” In Proceedings of Design Thinking Research Symposium, vol. 8. 2008.

Design facilitation has become an emerging skill and a new role for designers. This paper explores design facilitation as a way of bringing multiple voices together to address organizational design challenges. A lengthy set of characteristics and skills that a design facilitator must have to be effective is also included. This list was synthesized, along with the researcher’s own knowledge of design facilitation, to yield an evaluative set of criteria on which a facilitator can be judged for appropriateness.

**Brophy, Jere, and Thomas L. Good.** “Looking in classrooms.” New York (1997).

This book is a comprehensive and instructive review of the major literature regarding effective classroom instructional practice. Good & Brophy delve into teacher practice and student outcomes and state that urban children are likely to be labeled at “at-risk” and this communicates and fosters low expectations, which can go on to produce a negative self-fulfilling prophecy. This source bridges the gap in knowledge between why urban children are labeled as at-risk and what are the consequences of such a label.

**Brown, Tim.** “Design thinking.” Harvard business review 86, no. 6 (2008): 84.

Tim Brown is a leading practitioner in the field of design thinking and CEO of IDEO, an award winning innovation and design firm. In his new book, *Change by Design*, Brown shows how the techniques and strategies of design can be incorporated into every day business culture. This book is meant for those who want to utilize design thinking as an approach to solving problems within their organization and deliver innovation solutions.

**Cancar, Ivana, and Darka Podmenik.** “Youth Unemployment: Should We Detect Talents and Develop Career Paths Earlier?.” In Knowledge and Learning: Global Empowerment; Proceedings of the Management, Knowledge and Learning International Conference 2012, pp. 443-447. International School for Social and Business Studies, Celje, Slovenia, 2012.

In this article, Ivana Cancar, from the Institute for Developmental and Strategic Analysis in Slovenia, examines the possibility of early identification of talent as a way to secure better employment fit and opportunities. By identifying talents and competencies earlier, organizations have to spend less time retraining and re-educating young job seekers. Cancar examines if the current educational system adequately prepares young adults for the future by helping them to find their natural talents and abilities. Identifying talents is core to the young people of our generation in securing employment opportunities that they can be successful in. Cancar also defines talents as the sum of each person’s abilities, his or her inter-instinct gifts, skills, knowledge, experiences, intelligence, judgment, attitude, character, and drive. This definition helps to shape the way in which this research is defining talent in at-risk urban youth.

**Checkoway, Barry, and Katie Richards-Schuster.** “Youth participation in evaluation and research as a way of lifting new voices.” *Children Youth and Environments* 14, no. 2 (2004): 84-98.

Youth initiatives that are self-driven, rather than adult-driven, are becoming more and more popular. In this article, Checkoway discusses those programs that have been found to be effective. However, he also states that while empowering youth through the design process, one may encounter challenges inherent in this nature of work. He states that co-creative activities already can be constrained due to financial resources, staff, and time which is intensified when youth are involved in the process as well.

**Craig, Dorothy Valcarcel.** *Action Research Essentials*. Vol. 11. John Wiley & Sons, 2009.

This text is a practical guide of Craig’s own experience with working in action based research. She provides a step-by-step instructional of how to conduct action

“Crispus Attucks High School--Indianapolis: A Discover Our Shared Heritage Travel Itinerary.” National Parks Service. Accessed April 9, 2015.

Crispus Attucks website offers up much information for current and prospective students as well as an in-depth look at the history behind the school. It describes the building of Crispus Attucks in 1920, all the way through busing for racial integration in the 1960’s. The school served as the context for reaching at-risk urban youth as it is situated in downtown Indianapolis and 80% of the school’s population is below the poverty line and therefore, considered to be at-risk.

"D.school: Institute of Design at Stanford." Accessed April 10, 2015.

The Stanford d. School offers classes on design thinking where they welcome students of all disciplines to come and learn about the design process and how it could relate to their work. The d.School also offers on their website an extensive array of tools to use when implying design thinking methods and approach. These include lessons on terminology such as "empathy" which was useful when framing the facilitator characteristics.

**Dobizl, Janis Kay.** "Understanding at-risk youth and intervention programs that help them succeed in school." PhD diss., University of Wisconsin–Stout, 2002.

The purpose of this research paper by Janis Kay Dobizl, a master's candidate at the University of Wisconsin, was to explore what "at-risk" really means, what impact and misconceptions this label has on society, and school-wide intervention programs that are designed to reach students' at-risk and promote school success. Dobizl outlines many important factors that cause a student to be considered "at-risk" which impact the way in which at-risk urban youth are being defined within this research project. She also discusses the national dilemma of "at-risk" youth in our country and how their presence has social and economic implications for individuals and for society. This article justifies the duty our society has to helping the at-risk youth population, as well as the collaborative nature in which we need to implement in order to benefit and aid the youth by helping them recognize and reach their full potential.

**Dubberly, Hugh, and Shelley Evenson.** "On modeling The analysis-synthesis bridge model." *interactions* 15, no. 2 (2008): 57-61.

This article discusses what Dubberly and Evenson refer to as "the gap" that designers experience between analysis and synthesis. What happens during this time? The authors explain this difficult concept as the 'analysis-synthesis bridge model,' which is broken up into four quadrants of current and preferred states.

Within this article, Dubberly discusses several different models of design process, most notably Vijay Kumar's innovation model which was synthesized along with other models to yield this research's design process.

**Garbarino, James.** "The stress of being a poor child in America." *Child and Adolescent Psychiatric Clinics of North America* 7, no. 1 (1998): 105-19.

This article explores the complex topic of child poverty. It focuses on the psychological meanings of poverty in American society. Garbarino points out that issues of shame are linked to economic inequality rather than limited resource possession which are at the core of clinical issues associated with poverty. He also states that as a result of living in extreme poverty, families demonstrate a wide variety of problems among their children and youth. This source helps to define the reasoning behind an "at-risk" status of low socioeconomic families.

**Gewirth, Alan.** Self-fulfillment. Princeton University Press, 2009.

Alan Gewirth was a professor of philosophy at the University of Chicago and known for his research on Self-fulfillment. In this book he presents a systematic study of two models of self-fulfillment—Aspiration-fulfillment and capacity-fulfillment and shows how each contributes to the intrinsic value of human life. Gewirth provides a useful definition of self-fulfillment as “carrying to fruition one’s deepest desires or one’s worthiest capacities”. This definition is central to the idea and practice of helping at-risk urban youth to uncover their talents and interests in order to move them closer to a sense of self-fulfillment.

**Hanson, Sandra L.** “Lost talent: Unrealized educational aspirations and expectations among US youths.” *Sociology of education* (1994): 159-183.

This article discusses the analysis of data in late high school youth, and post-high school students, to explore lost talents. Hanson maintains that lost talent occurs when students who show signs of early talent have educational expectations that fall short of their aspirations, have reduced aspirations over time, or are not able to realize their earlier expectations. This source helps to draw a connection between youth who experience hardships, such as low socioeconomic status backgrounds, and a greater tendency to experience low expectations that eventually lead to a negative self-fulfilling prophecy.

**Herr, Kathryn and Gary L. Anderson**, eds. The action research dissertation: A guide for students and faculty. Sage, 2005.

This book helps to distill the authors' own experiences working in action research into a how-to guide for graduate students. Herr and Anderson provide an in-depth look at the complexity of action research as well as different definitions and uses amongst diverse fields. While providing an overview, its rationale for using it is also clearly defined and helped to define why action-based research was the appropriate route for this research.

**Heskett, John**. Toothpicks and logos: Design in everyday life. Vol. 1. Oxford: Oxford University Press, 2002.

Design is an omnipresent force within all of our every day lives. In this book, John Heskett offers a unique perspective on the field of design and how it has emerged from the very beginning of time. This book reveals how integral to our lives design really is and therefore, how the concept can be quite confusing to those who don't feel that they are necessarily 'designers.' Heskett broadly defines design as one of the most basic expressions of what it is to be human- the reshaping of the environment to meet our needs and answer our desires.



“International Conference on Urban Youth at Risk: Strong Families, Caring Communities & Inclusive Cities: “The LAC Experience”” UN-HABITAT: United Nations Human Settlement Programme. Accessed September 19, 2014.

The United Nations Human Settlements Programme hosted an international conference in 2003 on at-risk urban youth. At this conference, “youth at risk” were defined as “young people whose background places them ‘at-risk’ of future offending or victimization due to environmental, social, and family conditions that hinder their personal development and successful integration into the economy and society.” This definition stresses the factors that contribute to placing a youth at-risk as well as how being ‘at-risk’ negatively impacts their life. These components contribute to the definition of “at-risk urban youth” that this research is utilizing.

**Jarjoura, G. Roger, Ruth A. Triplett, and Gregory P. Brinker.** “Growing up poor: Examining the link between persistent childhood poverty and delinquency.” *Journal of Quantitative Criminology* 18, no. 2 (2002): 159-187.

This article demonstrates findings from aggregate-level and ethnographic research which suggest that poverty and delinquency are related. However, the inability of individual-level quantitative research to demonstrate consistent evidence of this relationship has been used to call into question whether poverty is indeed related to an increased propensity for delinquent involvement. Overall findings of this research conducted indicate that exposure to poverty and the timing of such exposure are indeed related to an increased likelihood of involvement in delinquency. This article ultimately links low socioeconomic to juvenile delinquency.

**Kolberg, William H.** "Employment, the private sector, and at-risk youth." The Annals of the American Academy of Political and Social Science (1987): 94-100.

The high rates of crime and violence in the United States reflect in large part the distress of one segment of our society, at-risk youth. Kolberg discusses the social, economic, business, and even national security issues surrounding at-risk youth and the implications of such issues. This source gives a justification as to why we, as a society, should work together to improve the lives of at-risk youth and further points to a better society for all.

**Kumar, Vijay.** "A process for practicing design innovation." Journal of Business Strategy 30, no. 2/3 (2009): 91-100.

Companies are rapidly increasing their adoption of design processes as a key component of their innovation practice. Kumar discusses the benefit for businesses in adopting these practice since they help to produce high user value as well as economic value and business value. This paper describes how design processes can be used effectively in business projects through an understanding of design principles, tools, and frameworks.

**Larson, Reed, Kathrin Walker, and Nickki Pearce.** “A comparison of youth-driven and adult-driven youth programs: Balancing inputs from youth and adults.” *Journal of community psychology* 33, no. 1 (2005): 57-74.

This article explores the emergence of experiences in youth programs that differed according to whether or not they were youth-led or adult-driven. The authors provide an in-depth qualitative assessment of four such programs where it was found the more adults are in charge and lead a group of participants, the less motivated and creative youth become. Therefore, it is important to allow youth to drive themselves and their own creative process, whilst giving them the freedom and power to do so. This was a very important finding in this research and helped to shape the engagements with at-risk urban youth.

**Mattelmäki, Tuuli, and Froukje Sleeswijk Visser.** “Lost in Co-X: Interpretations of Co-design and Co-creation.” In 2011). *Diversity and Unity, Proceedings of IASDR2011, the 4th World Conference on Design Research*, vol. 31. 2011.

Authors discuss co-design and co-creation as terms that appear widely in a variety of different mediums such as scientific literature, professional magazines, websites of product development companies, design research and market agencies and even public organization reports. Here, the authors clarify the difference between co-design and co-creation in the context of design and design research by discussing the similarities and differences between the two approaches. This source provides an explanation that by utilizing collaboration, through co-design or co-creation, this enhances the creativity and exchange between people in the process and ultimately provides a more holistic solution for all stakeholders involved. By utilizing this approach with at-risk urban youth, this will encourage their creativity throughout the design process.

**McDougall, Sean.** “Co-production, Co-design and Co-creation: What Is the Difference?” Stakeholder Design. January 11, 2012. Accessed November 15, 2014.

Following a meeting of the Co-Production Network in Manchester, McDougall decided to jot down a few comments about the concept of co-production, but this left him wondering how it differs from other forms of innovation such as co-design or UX design. This quandary became the basis of this article which examines the differences between the three approaches. This source provides some key components and benefits of co-design including the fact that co-design allows for designers to push participants to go further than they might by themselves. By utilizing co-design with at-risk urban youth, they will be pushed to reflect deeper on themselves than they have been asked to before and designers possess the skills needed to do this.

**McKinney, S. E., et al.** “Responding to the needs of at-risk students in poverty.” *Essays in education* 17.5 (2006).

Sueanne McKinney, an associate professor at Old Dominion University, notes that a major challenge within the educational system today is improving the quality of instruction for urban students. She describes a few hardships that are typical of growing up in an urban environment as concentrated poverty, family instability, and early exposure to violence. From an early age, urban children are forced to face these hardships as obstacles in their way of academic, personal, and social success. Within education, urban teachers need to be conscious of these hardships and obstacles in order to better impact the urban child's success in school. In this paper, McKinney identifies external factors (outside of school) and internal factors (inside of school) that continuously place urban children at risk for academic failure. These factors help define “at-risk urban youth” in the scope of this research project.

**McMillan, James H., and Daisy F. Reed.** "At-risk students and resiliency: Factors contributing to academic success." The Clearing House 67, no. 3 (1994): 137-140.

This article discusses resiliency in at-risk students and factors that contribute to their academic success. It also points out that in at-risk youth, they must be shown small initial success on a regular basis in order to stimulate their motivation to succeed in the task at hand. The small initial successes experienced by the youth, give them an increase in self-esteem and a sense of accomplishment. This source is a key component to this research because it serves as the basis for demonstrating initial success to at-risk urban youth through co-design which will in turn cause them to become more motivated to uncover their talents and interests.

**McWhirter, J. Jeffries.** At-risk Youth: A Comprehensive Response:  
For Counselors, Teachers, Psychologists, and Human Service  
Professionals. 3rd ed. Pacific Grove, CA: Brooks/Cole Pub., 2004.

This book addresses children and youth who are at-risk for a variety of problem behaviors. McWhirter describes this as one of the greatest social, family, and community concerns of today. To help teachers, psychologists, and human service professionals to best prepare for working with at-risk youth, this book provides conceptual and practical information on key issues and problems they may face while working with this population. Prevention and intervention techniques are also described to help future and current professionals working with at-risk youth to perform their jobs successfully and ultimately improve the lives of at-risk youth.

Being viewed as “at-risk” is less of a discrete, unitary diagnostic category but more so a series of steps along a continuum. This book illustrates this continuum from minimal and remote risk to high and imminent risk. This continuum also describes personal behavior that anticipates imminent risk, which eventually leads to activities associated with being engaged in one or more types of risky behavior. This continuum is one way to determine if a youth is “at-risk” by outlining particular stages or degree of risky behaviors.

“Method 3 of 100: Free-listing.” ‘Designing the User Experience at Autodesk’ Accessed April 10, 2015.

“Free-listing” is a simple technique described by Chauncy Wilson as “a technique where you ask an individual or a group to list as many ideas or items on [Topic X] as possible”. This method is most often used when a facilitator has limited time with a group. On his blog, Wilson details the procedure in how to use free-listing as a method, which helped to structure the listing method that was done with at-risk urban youth during the second and third research sessions.

“Project H.” Project H: If You Build It. January 1, 2013. Accessed December 3, 2014.

Project H, founded by Emily Pilloton, is a program that uses the power of creativity, design and hands-on building to amplify the raw brilliance of youth, transform communities, and improve K-12 public education from within. The programs within Project H teach youth rigorous design iteration, tinkering, applied arts and sciences, and vocational building skills to give them the creative, technical, and leadership tools necessary to make positive, long-lasting change in their lives and communities. This case study is an example of the types of activities at-risk urban youth could engage in, through co-design utilizing creating/making, collaboration, and iteration.



**Sanders, Elizabeth B-N.** “Information, inspiration and co-creation.” In Proceedings of the 6th International Conference of the European Academy of Design. 2005.

Liz Sanders, a leading researcher in the field of co-design, identifies the co-evolution of two distinct approaches to human-centered design research in practice: research that informs the design development process and research that inspires the design development process. She also describes the design space of co-creating, which is emerging at the intersection of the co-evolution of consuming, experiencing, adapting, and co-creating. Although this article discusses the patterns in the design development process, Sanders gives a definition of co-creation that emphasizes the collaborative nature of the design development. The practice of collaboration between designers and non-designers is central to how methods of co-design will be conducted.

**Sanders, Elizabeth B-N., and Pieter Jan Stappers.** “Co-creation and the new landscapes of design.” Co-design 4, no. 1 (2008).

Sanders and Stappers give a comprehensive overview of the evolution of design research. A key component of this evolution is the practice of co-designing with your users, which is changing the role of the designer, the researcher, and the person formerly known as the “user”. This evolution of design will hopefully support a transformation toward a more sustainable way of living in the future. The definition of “co-design” Sanders and Stappers set forth, as a “collective-creativity of collaborating designers and people not trained in design working together in the design development process”, emphasizes the need to collaborate amongst designers and non-designers within the design process. The focus of this research project will be to collaborate amongst at-risk urban youth utilizing co-design methods in order to create holistic solutions to put them on a path to self-fulfillment. This article is essential to defining core components of co-design such as collective creativity and collaboration.

**Sanders, Elizabeth B-N., and Pieter Jan Stappers.** Convivial toolbox: Generative research for the front end of design. BIS, 2012.

This book is by leading researchers in the field of co-design, Liz Sanders and Pieter Jan Stappers. It discusses generative design research as an approach to bring the people designers serve directly into the design process in order to ensure that their needs and dreams are met for the future. This book introduces co-design, or co-creation, as an innovative approach to problem-solving and the development of human-centered products, systems, services, and environments. This book details co-design as an approach and discusses the benefits of using it in the form of case studies.

**Schön, Donald A.** "Educating the reflective practitioner: Toward a new design for teaching and learning in the professions." San Francisco (1987).

Many profession emphasize different analytical techniques while working in an individual or collaborative environment. However, many do not emphasize the importance of reflection. Schön describes "reflection-in-action" as a useful way for one to reflect in the moment about why they are doing a particular action which will thus reveal underlying motives and desires. This book serves as ground breaking research in the way of reflection and strives to teach professionals how they can incorporate this in their every day lives and work.

**Shawn, Monica H., and Robert M. Bossarte.** "Assessing and quantifying high risk: Comparing risky behaviors by youth in an urban, disadvantaged community with nationally representative youth." Public Health Reports 124, no. 2 (2009).

The purpose of this study, conducted by Monica Shawn, was to examine whether youth who live in an urban, disadvantaged community are significantly more likely than youth representing the nation to engage in a range of health-compromising behaviors. The results showed that youth in urban, disadvantaged communities were significantly more likely to engage in vandalism, theft, violence, and selling drugs. Youth also reported in these disadvantaged communities, that they received significantly less support from their homes and schools and less monitoring by their parents. These findings highlighted characteristics and behaviors that place youth "at-risk", which need to be considered when defining "at-risk urban youth" for the scope of this research project.

Silverman, Linda Kreger. "At-risk youth and the creative process." In ARTernatives for At-Risk Youth Conference, May, vol. 14. 2004.

Silverman a psychologist and founder of the Gifted Development Center for youth and children. In this article she discusses approaches that can help enable youth who are at risk for delinquency to choose a more constructive path in their lives. She believes that the introduction of art into youth's lives is a way for them to foster their creativity and right hemispheric gifts and therefore lead them toward a more positive path. By helping to reshape classroom activities to a visual-spatial learning style, at-risk youth can be guided toward a more promising future, as stated by Silverman.

"Situations That Put Youth At Risk." National Dropout Prevention Center/Network. Accessed September 18, 2014.

There are a variety of circumstances that often place students at risk. These circumstances are broken down into four main categories: school related, student related, community related, and family related. Within each category, is an example of a circumstance that puts a student at risk. For example, under the School Related category are at-risk factors such as low expectations, and under the Student Related category are at-risk factors such as low self-esteem/self-efficacy. These at-risk factors help to establish and define what an "at-risk" urban youth is within the scope of this project.

“Start An Education Revolution In Seven Steps.” Co.Design.

August 12, 2011. Accessed September 9, 2014.

The Tread Project is a program designed to engage urban high school students through their passion for footwear. The program aimed at giving the youth an introduction to design thinking, creative problem solving, and the footwear-design process in seven weeks. This program was piloted at Hughes STEM High School, amongst 25 10th graders, in inner city Cincinnati where 85% of students are below the poverty line. The point of this program was not to create the next generation of designers but to give students a crash course on how they can take their passions and leverage the design process to help determine their futures. This is an example of a successful program that is aimed at giving at-risk urban youth the opportunity and tools to learn useful skills as well as ascertain how they can go about achieving their dreams and goals.

**Stickdorn, Marc, and Jakob Schneider.** This is service design thinking: Basics, tools, cases. Wiley, 2011.

Service design thinking is the designing and marketing of services that improve the customer experience, and the interactions between the service providers and the customers, according to Stickdorn and Schneider. This book contains three sections, the basics of service design thinking, describing tools and methods utilized, and vivid case study examples from 5 companies who have done projects within the field of Service Design.

Toolkit, Human Centered Design. "IDEO." Retrieved on 24th November (2008).

The human-centered design kit is an open source tool made available by IDEO. This toolkit was specifically produced for NGOs and social enterprises that work with impoverished communities in Africa, Asia, and Latin America. However, many are starting to use it within other contexts as well. The kit walks users through the human-centered design process by giving detailed instruction and methods along the way.

**Wells, Shirley E.** At-risk youth: Identification, programs, and recommendations. Englewood, CO: Teacher Ideas Press, 1990.

This book describes ways to identify students who are likely to drop out of schools, suggests programs to help those students to stay in school, and provides ideas for school administrators, teachers, and parents. Wells also delves into programs that are needed to help support those students that drop out of school such as programs for welfare, crime, and teen parenthood prevention. By abandoning the at-risk youth population this places an economic burden on our society in order to support these programs. Wells suggests ways in which we can avoid this predicament altogether by keeping at-risk children in school and on a positive path.

## >> Tool templates

## Discovering Your Talents and Interests

On the lines below **List** what you believe are your talents and activities, hobbies, etc. that you are interested in. If you need more room use the extra paper given to you.

## Talents

A natural aptitude or skill (i.e. Drawing, singing)

## Interests

The quality of exciting curiosity or holding the attention

[illegible]

*Listing tool*

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On the lines below **List** what you believe are your talents and activities, hobbies, etc. that you are interested in. If you need more room use the extra paper given to you.

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A natural aptitude or skill (i.e. Drawing, singing)

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The quality of exciting curiosity or holding the attention



### My Collage

Step 1

On this sheet of paper, create a collage which is a visual representation of your **interests**, **talents**, and future **goals**.

Cut out and paste imagery, draw, or otherwise creatively express yourself in any way you wish to communicate your talents, interests, and goals.

If you get stuck think about:

- How your talents and interests relate to your future goals
- Different aspects of your talents and interests
- How your talents, interests, goals make you feel and why
- How did you find out these were interests or talents of yours

Name: \_\_\_\_\_

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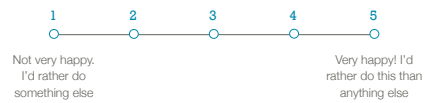
- How your talents and interests relate to your future goals
- Different aspects of your talents and interests
- How your talents, interests, goals make you feel and why
- How did you find out these were interests or talents of yours

Collage tool

---

Name: \_\_\_\_\_

"Happiness" is defined as a feeling you get from doing something for yourself, or for others, that you enjoy.



**List** each talent/interest/goal from your collage:

[illegible]

**Rank** each talent/interest/goal on the happiness scale

The image displays a grid of 10 identical horizontal number lines, arranged in 5 rows and 2 columns. Each number line has 5 nodes, labeled 1 through 5 from left to right. The nodes are represented by blue circles. The lines are arranged in a 5x2 grid.

**Narrow** your list of talents and interests down to 3 to focus on

1

Why?

2

Why?

3

Why?

Semantic differential tool

My Journey

Name: \_\_\_\_\_

Step  
1

Briefly **Describe** how you would like to use your talents and interests in the future:

Step  
2

Now, on the lines below list:

- **People** that could help you, and how they could help you to use your talents and interests to reach your goals
- **Resources** you may need to accomplish your goals with your talents and interests (ex. Tutoring center, YMCA, online website)

People

Resources

User journey map step 1 and 2 tool

My Journey

Step 3

Finally, you are ready to make your timeline!

- In this space, you are going to make a detailed visual representation of how you will accomplish your goals with the help of your **talents** and **interests**
- Make sure to include the **people** and **resources** you already listed along the way that could help and how they can help you
- You may use this space to draw on or to build your 3D model on and add captions. Whichever format makes you feel more creative.

Name: \_\_\_\_\_

My Journey

Step 3

Finally, you are ready to make your timeline!

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3D user journey map tool

Thank you for participating in the research session held at Crispus Attucks High School

During the session, you created a timeline or map of how you would like to reach your goals while using your talents, interests, and people and resources that can help you along the way. Be as detailed as possible so that you can take this plan and make your dreams a reality!

For this exercise, you are now going to make that plan more detailed. Below is a table where you can list **each step** you are going to take in order, **who** will be involved in each step, **when** each step should be completed and **where** these occur.

Name: \_\_\_\_\_

Remember **MAPS**, helpful reminders when setting your goals:

- **Measurable** means that you are giving a specific time to each step that you plan to do and you are as specific as possible so you could assign a year or even a month to a step
- **Attainable** means that YOU can reach that goal (with the help of the people you list). So take into account what your talents and interests are here
- **Positive** goals help to motivate you. For example, you wouldn't want to put "stop getting bad grades in school" because that's negative and will make you feel like you can't accomplish your goals.
- **Specific** means setting a goal as clearly as possible.

"Remember to start with a **verb** so that you can create a do-able action! (Example: start with words like "find" "make" "begin")"

What will be done?	Who will be involved?	Where will this be done?	When will this be done?
Example: <div><div>Graduate school</div><div><div>1</div>Finish thesis project</div><div><div>2</div>Finish writing thesis paper</div><div><div>3</div>Get good grades in classes</div></div>	<div><div>- Advisor (Pamela N.)</div><div>- Other professors (Terri W., Dr. G)</div><div>- Youth at Crispus Attucks Medical Magnet School</div><div>- Mr. Moats</div><div>- Learning Center Teacher</div><div>- Me</div></div> <div><div>- Me</div><div>- Advisor (Pamela N.)</div><div>- Other professors (Terri W., Dr. G, Aaron G.)</div><div>- My parents for support</div><div>- Other students for help (Nick W.)</div></div> <div><div>- Me</div><div>- Advisor (Pamela N.)</div></div>	<div><div>- Crispus Attucks Medical Magnet School</div><div>- IUPUI</div></div> <div><div>- IUPUI</div><div>- My laptop</div><div>- My home</div><div>- Online research</div><div>- Books for research</div></div> <div><div>- IUPUI</div></div>	<div><div>- April 13, 2015</div></div> <div><div>- April 24th, 2015 by 5:00 PM</div></div> <div><div>- End of this school year</div></div>

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Name: \_\_\_\_\_

Actionable Planning booklet pages with example

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\*Remember to start with a **verb** so that you can create a do-able action! (Example: start with words like "find" "make" "begin")

What will be done?	Who will be involved?	Where will this be done?	When will this be done?
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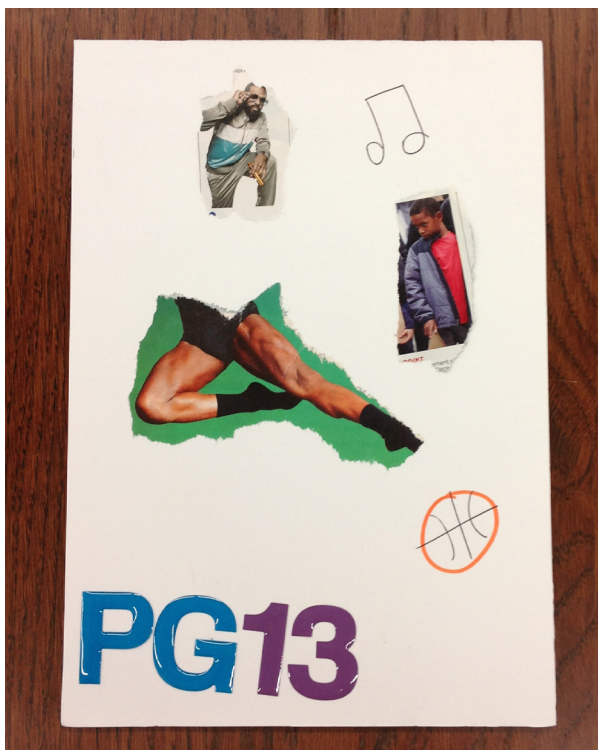
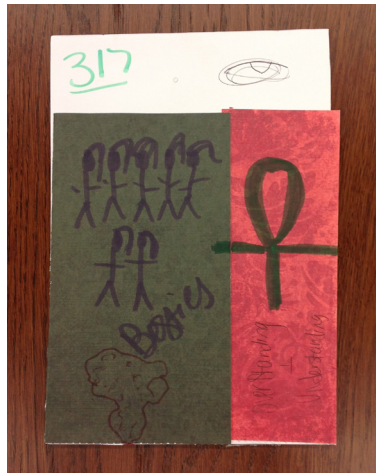
Actionable Planning booklet pages

## >> Designer's core competencies by Chris Conley

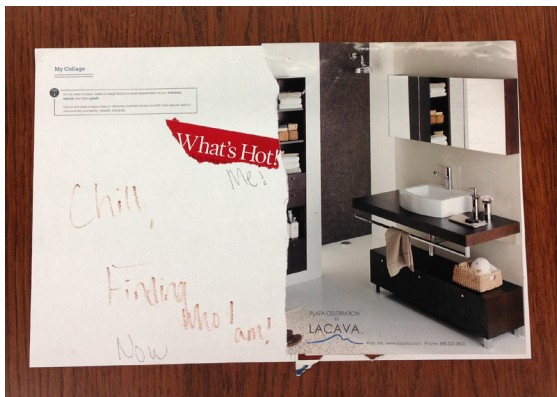
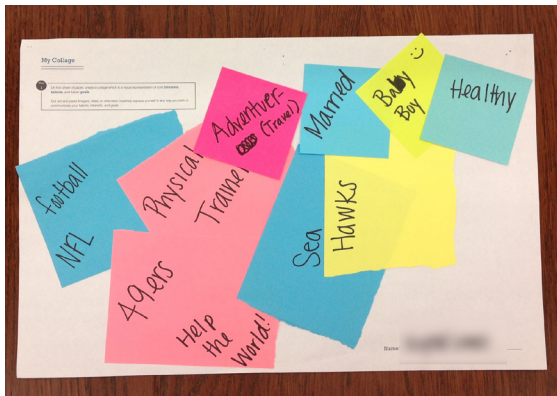
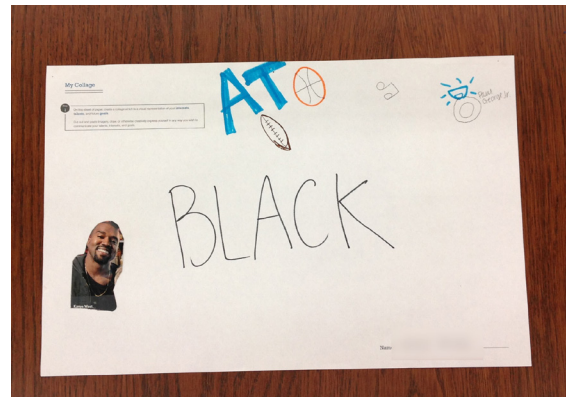
1. The ability to understand the context or circumstances of a design problem and frame them in an insightful way
2. The ability to work at a level of abstraction appropriate to the situation at hand
3. The ability to model and visualize solutions even with imperfect information
4. An approach to problem solving that involves the simultaneous creation and evaluation of multiple alternatives
5. The ability to add or maintain value as pieces are integrated into a whole
6. The ability to establish purposeful relationships among elements of a solution and between the solution and its context
7. The ability to use form to embody ideas and to communicate their value



>> Research Session #1 tools

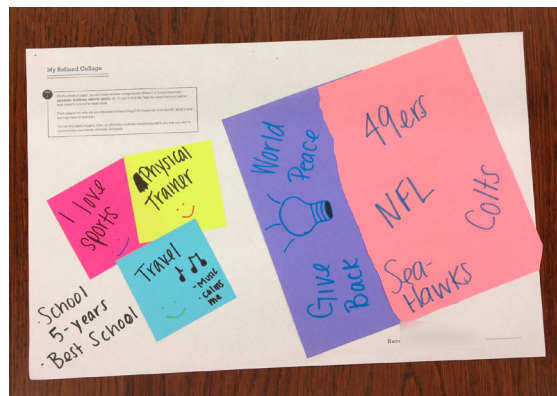
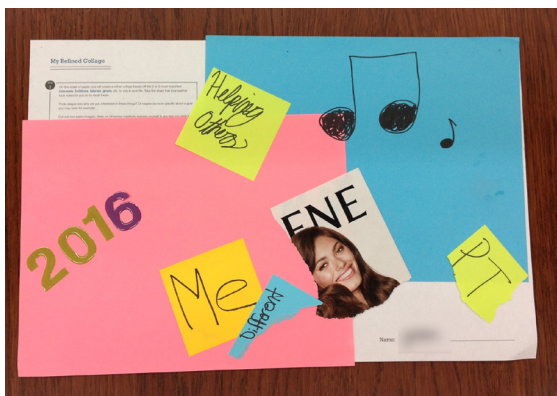
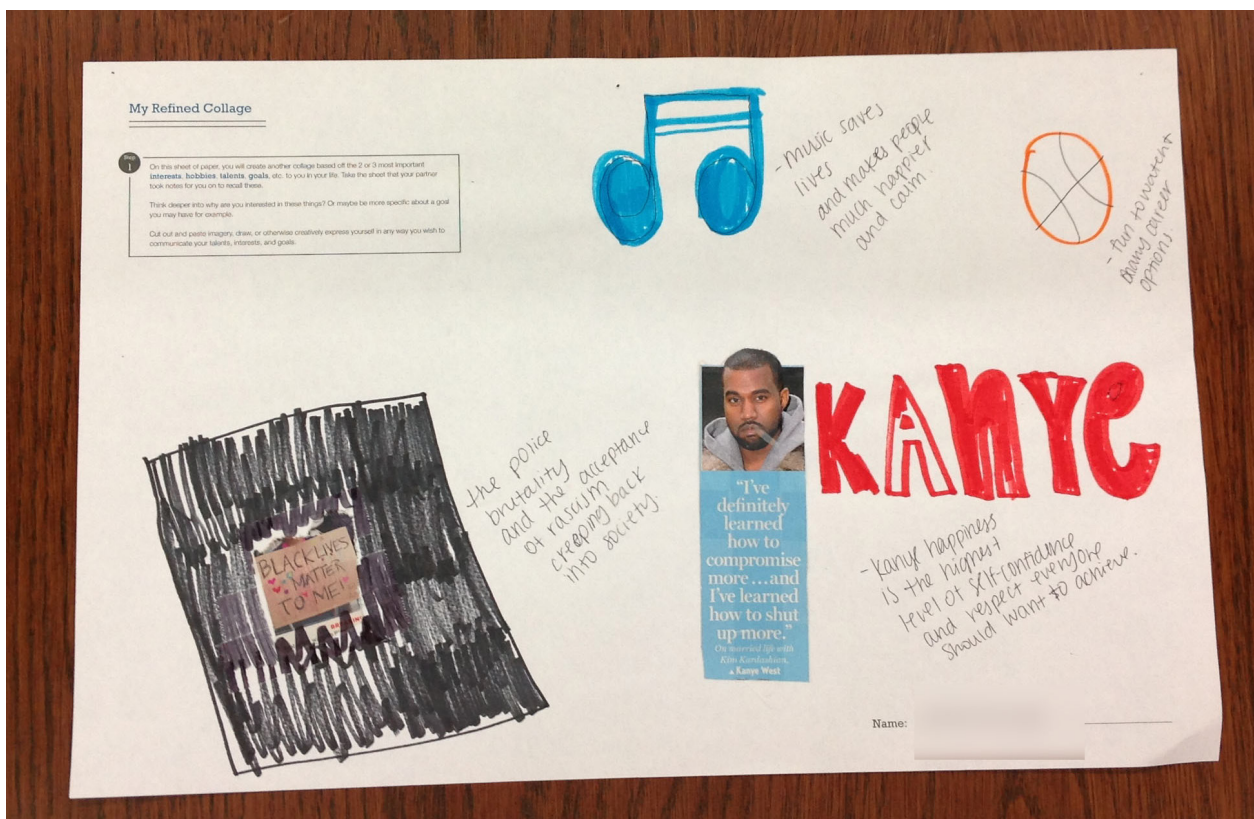


Research session #1 totem truths



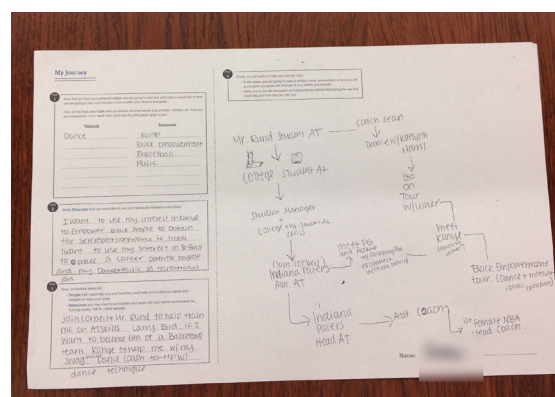
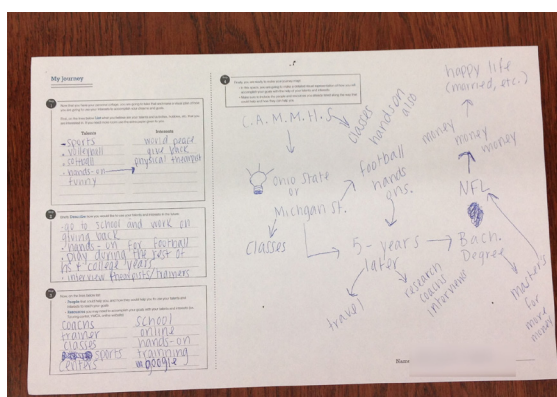
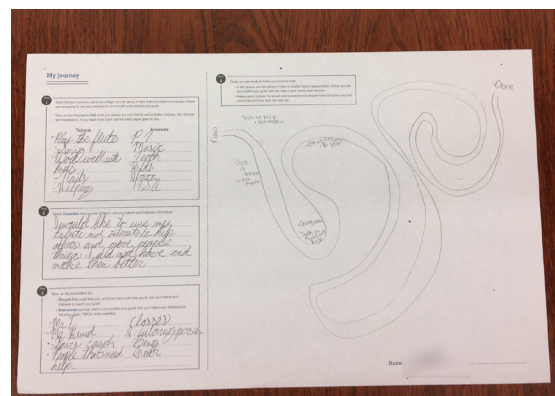
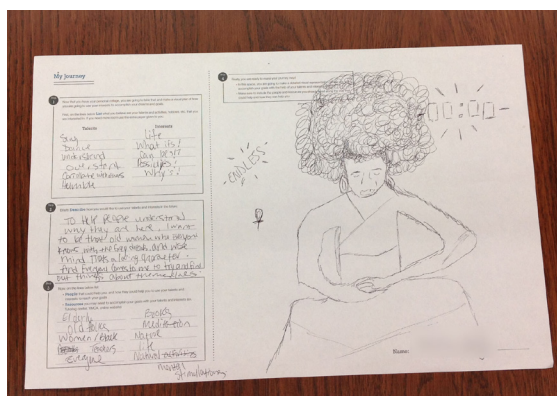
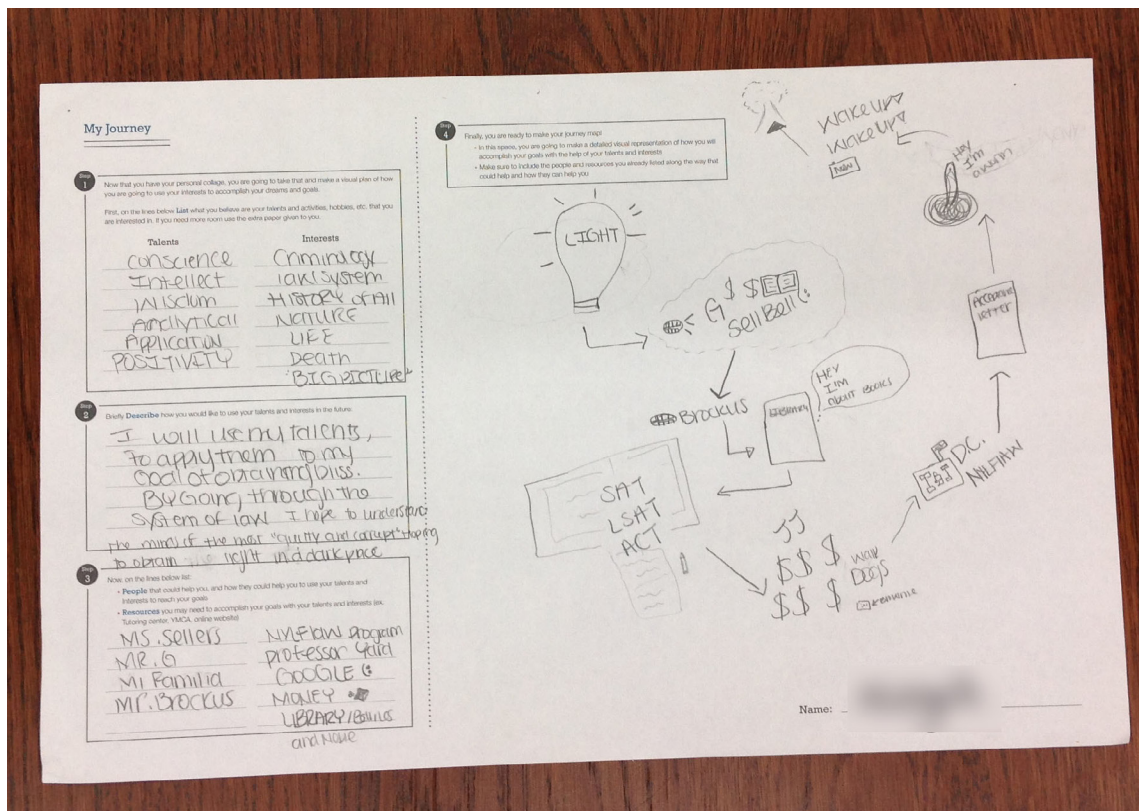
Research session #1 collages





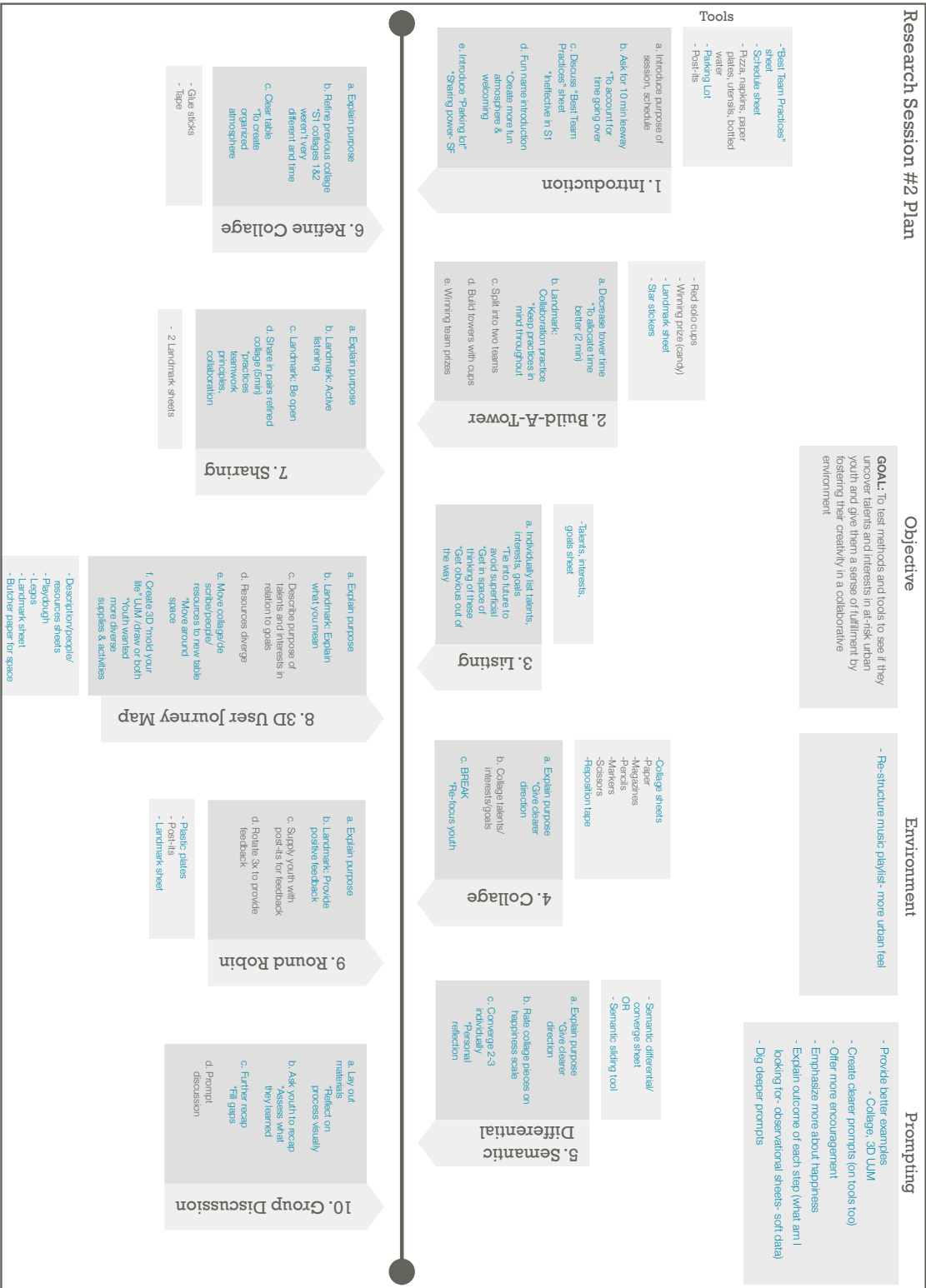
Research session #1 refined collages



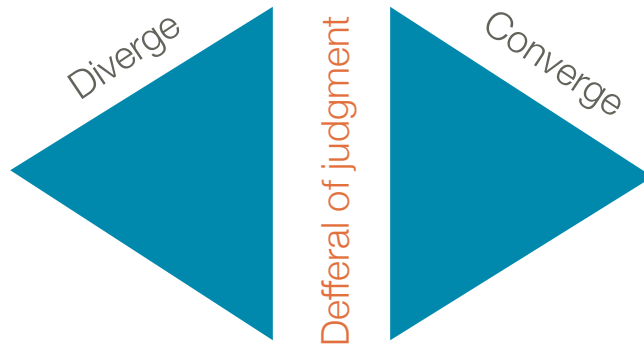


Research session #1 refined collages

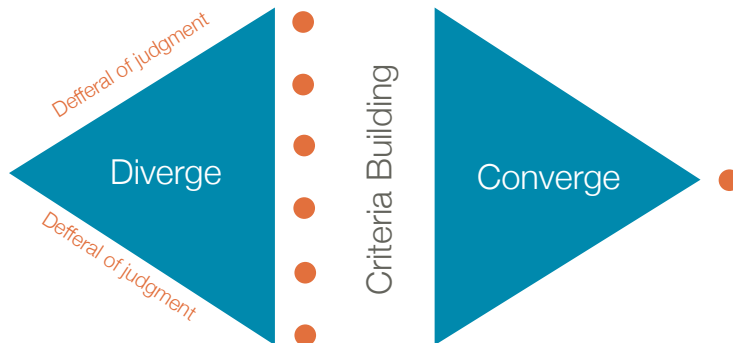
>> Research planning framework session #2



## >> Process skills



This model, proposed by Min Basadur, describes a process of diverging, or coming up with a lot of ideas while suspending one's own judgment. After a diverging process has taken place, a convergence step on those ideas is done so that one can move ahead with a few most appropriate ideas.



This model was adapted from Basadur's original process skills model by graduate students at Herron School of Art and Design in Indianapolis, IN. This model was used throughout this research because it clearly denotes that deferral of judgment comes within the divergence phase rather than in between divergence and convergence. Also, the added notion of criteria building between the two is important. Criteria is what we use to base our convergence on and is important to the overall design process.

## >> Parking lot prompts

1. A collaborative practice on the card I gave you, that you either liked a lot or think you did really well at in this activity and throw it up on the parking lot
2. Interest of yours that you hadn't maybe thought of before this activity but you wrote down when I asked you to think deeper and throw it up on the parking lot.
3. One of your talents or interests that you put on your collage that makes you the happiest. This is something that makes you happier than anything else.
4. Your favorite talent or interest that you put on your collage that you think you will use in your future in some way
5. Something more specific you put on your collage based off one of your talents and interests. For example, if any thing you love about dancing was you get to hang out with your friends write "friends" on your post-it. But if you like dancing because it's a good exercise write down "exercise"
6. A specific practice, either for active listening or supporting others, that you don't feel was demonstrated either by you or others
7. Now go ahead and write down on a post-it your favorite part of today's session. It could be an activity or a tool or anything
8. A way you would like to improve this session. It can be anything down to a specific activity, something additional you would've liked with supplies or tools



>> The makeup of a design facilitator

Characteristics:	Skills:	Mindset:
Empathic	Ability to seek understanding Strong emotional intelligence Can gain trust from participants Ability to share stories and relate to others Ability to give support to participants to open up	Strong desire to help others Strong sense of purpose Openness of oneself Positive and upbeat attitude Encouraging demeanor
Objective	Ability to stay impartial to participants beliefs and values Ability to work with diverse groups of people Values diverse opinions and collective input	Suspension of judgment Comfortable with ambiguity Not afraid to fail and improve upon that
Process oriented	Able to set goals and work toward them with a group Explains steps and instructions clearly Can navigate complexity Align people toward a common and constructive vision Work within constraints Tolerance for adaptability	Organized Be able to read a room and sense what is needed Can create a participatory and collaborative environment Can keep participants focused on tasks at hand Can keep participants attention during periods of instruction and activities
Creative	Well developed ability to visualize and represent ideas back to the group Ability to deploy generative techniques to elicit the creation of innovative options	Facilitate creative solutions to complex problems
Flexible	Ability to guide group discussion naturally Ability to prepare adequately	Calm and relaxed demeanor Laid-back and non-imposing

# Research Session #2 Plan

Tools

- "Best Team Practices" sheet
- Schedule sheet
- Pizza, napkins, paper plates, utensils, bottled water
- Parking lot
- Fostis

- Introduce purpose of session, schedule
- Briefly go over methods and tools  
To avoid youth uncomfortability
- Ask for 10 min leave-in  
Explain time constraint and no need to be perfect

- Discuss "Best Team Practices" sheet  
To set up and inform how they will be used
- Fun name introduction  
Create more fun atmosphere & welcoming
- Introduce "Parking lot"

## 1. Introduction

- Red solo cups
- Winning prize (cash)
- Landmark sheet
- Landmark cards (6 sets)
- Stripes
- Star stickers

- Explain purpose  
To set expectations
- Landmark:  
Collaboration  
Keep practices in mind throughout
- Split into two teams
- Build towers with cups
- Winning team prizes

## 2. Build-A-Tower

**GOAL:** To test methods and tools to see if they uncover talents and interests in at-risk urban youth and give them a sense of fulfillment by fostering their creativity in a collaborative environment

## Objective

- Talents, interests, goals sheet  
To facilitate youth digging deeper

- Explain purpose  
To set expectations
- Individually list talents, interests, goals
- Parking lot  
To see if youth successfully dug deeper

## 3. Listing

## Environment

- Give youth opportunity to pick own Pandora station

- Collage sheets
- Paper
- Magazines
- Pencils
- Markers
- Scissors

- Explain purpose  
To set expectations
- Converge on listing talent/ming 7/10 to future
- Supply gathering
- Collage talents/interests/goals
- Parking lot
- BREAK  
Relaxous youth Document

## 4. Collage

## Prompting

- Create clearer prompts (on tools too)
- Offer more encouragement
- Emphasize more about happiness
- Explain outcome of each step (what am I looking for- observational sheets- soft data and expectations)
- Dig deeper prompts

- Semantic differential/converge sheet

- Explain purpose  
To set expectations
- Rate collage pieces on happiness scale
- Coverage 2-3 individually/Why
- Parking lot

## 5. Semantic Differential

- Give youth tape/glue  
Avoid youth making collage #1 permanent
- Explain purpose
- Refine previous collage
- Parking lot

## 6. Refine Collage

- Explain purpose
- Landmark: Active listening
- Landmark: Be open
- Share in pairs refined collage (5min)
- Parking lot

## 7. Sharing

- 2 Landmark cards
- Sharing prompts sheet  
To give sharing structure that youth can follow

## 8. 3D User Journey Map

- Move to new table
- Explain purpose
- Describe future goals
- Resources/People diverge
- Create 3D model your life UJM draw or both

- Description/people/resources sheets
- Play dough
- Legos
- Pens, pencils, colored pencils
- Visual map sheets

## 9. Round Robin

- Explain purpose
- Landmark: Provide positive feedback
- Supply youth with post-its for feedback
- Rotate 3x to provide feedback
- Group talk
- Parking lot

- Small post-its
- Pens
- Landmark cards

## 10. Group Discussion

- Lay out materials  
Rated on process visually
- Incap  
To give big overall picture
- Landmark
- Prompt discussion

## >> Session goals

- Introduction:
  - o Youth fill out name cards
  - o Youth listen to me introduce the session as they eat pizza
  - o Youth agree that it is okay to go 10 min over
  - o Youth to introduce themselves
  - o *Outcome: youth to understand the purpose of the session and be enthusiastic to get started*
- Build-a-tower
  - o Smiling
  - o Laughing
  - o Working together- buy-in to collaboration
  - o Get excited when winning and/or win
  - o *Outcome: youth to enjoy working together and start off the session by having fun and loosening up*
- Listing
  - o Youth to link talents and interests with deeper talents and interests
  - o *Outcome: for youth to successfully think deeper about talents and interests and uncover underlying talents and interests*
- Collage
  - o Youth to work with creative supplies (buy-in to creativity)
  - o Youth to be visual when thinking of abstract concepts (i.e. talents and interests)
  - o Youth to be able to visualize one concept in many different ways due to different components
  - o Youth to express WHY they are interested in and talented in something
  - o *Outcome: for youth to be able to connect a T/I with a value—the underlying WHY*

- Semantic Differential

- o Youth the start linking their talents and interests with the level of happiness they provide
- o Youth to start to think of future and how T/I can impact this
- o Youth weigh T/I against one another to prioritize and converge based on future implications
- o Youth begin to dig deeper into WHY they would converge on 3 T/I
- o *Outcome: for youth the start to link talents and interests with future non-specific goals*

- Sharing

- o Youth to start to describe in an open forum (with peers) what they plan to do in their future
- o Youth to open up in a way they may be slightly uncomfortable with
- o Youth to start to accept others point of views on their life
- o *Outcome: For youth to begin the process of opening up and talking about T/I and their future*

- 3D User Journey Map

- o Youth to work with creative supplies (further creativity buy-in)
- o Creative supplies help youth to think of different ways to visualize and process information
- o Generate specific goal
- o Generate specific action steps to take to reach goal
- o Start to assign time to specific action goal and sub-goals within the timeline
- o *Outcome: Start to link people/resources/talents/interests/future*

- Round Robin

- o Learn what useful feedback
- o Give useful and positive feedback
- o Witness how other people are mapping out their lives
- o Iterate on maps of others
- o See feedback given to them (buy-in to iteration and co-collaborative efforts = co-design)
- o *Outcome: for youth to plan HOW they are going to get from point A to point B (happy) in their lives*

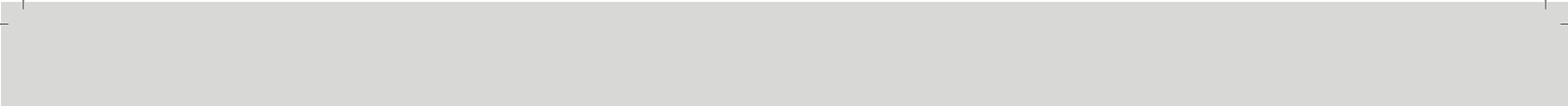
- Group discussion

- o Youth to be able to reflect on the entire process of the day
- o Youth to be able to see what they have uncovered
- o Youth to see benefits of co-design, creativity, collaboration
- o Youth to open up further in a group format
- o *Outcome: for youth (outwardly and inwardly [cannot measure though]) to realize that they have uncovered and that doing this will help lead them to a better/happier life*

## { 14 } Acknowledgments

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